Local Government and Cluster-Related Innovation Policy: Two Industry Clusters in the City of Toronto

Submitted by Patrick James Galvin to the University of Exeter as a thesis for the degree of Doctor of Philosophy in Politics in October 2011

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I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

Signature: Patrick James Galvin
ABSTRACT.

The literature on innovation policy and innovation suggests that cities are becoming an increasingly important site for innovation. Yet despite this claim, there is relatively little focused academic literature on local government per se and its role in developing cluster-related innovation policy. The purpose of this dissertation is to help fill that gap by undertaking an analysis of how cluster-related innovation policy development occurs in the City of Toronto. The analysis focuses as much as possible on cluster-related innovation policy in order to differentiate it from other broader and earlier conceptions of innovation policy.

This dissertation makes two main research contributions. First, it offers a more focused critical empirical examination of cluster-related innovation policy development at the municipal government level in Canada through two Toronto cluster case studies, the Toronto Aerospace Cluster and the Toronto Fashion Cluster. The second contribution is the local government-relevant analytical framework that is developed which draws needed analytical attention to the particular interwoven dynamics of three variables involved, as a way of understanding cluster-related innovation policy development within two different kinds of clusters.

The primary research question explored is: How have the concepts and practices of cluster-related innovation policy at the local level changed in the City of Toronto roughly in the last twelve years? In order to answer this question three main arguments are advanced and examined.

The first argument is that cluster-related innovation policy at the local government level, though it has the potential for eventual success, and though it is often touted as providing a very effective mechanism for leveraging a city’s limited amount of fiscal resources, suffers from a lack of conceptual clarity because it is embedded in a range of other related policies described and promoted in other ways including economic development policy, prosperity policy, competitiveness, and industrial sector policies.

The second argument is that cluster-related innovation policy at the local government level is likely to have only limited efficacy and impacts unless there are explicit sources of multi-level governance financial support and strong multi-level governance coordination.

The third argument is that cluster-related innovation policy at the local level cannot be based on a one size fits all approach given that mega-cities such as Toronto face different challenges of scale and coordination, and given that clusters such as aerospace and fashion exhibit diverse innovation characteristics and coordination and cluster formation challenges.

A qualitative research methodology is employed which is built around the analysis of two case studies using both documentary evidence and sources and also confidential interviews. The first technique consists of a systematic exploration of existing documentation from the City of Toronto on their clusters. Federal and provincial documents are also utilized in the case study analysis. The second complementary technique employed consists of semi-structured confidential interviews. These interviews are used for a detailed investigation of participant views of cluster-related innovation policy, and policy processes, during the twelve-year period in the two case studies. The analysis is also placed within historical context through the development of two historical
chapters. Two chapters showcase the development of these industries under earlier kinds of industrial, trade and social public policy prior to the case study analysis of each cluster.

When the evidence for this first argument is examined, it seems to indicate that cluster-related innovation policy could have provided a very effective mechanism for leveraging the City’s limited amount of fiscal resources but fell well short of doing so, and thus this first argument is borne out empirically. The evidence for the second argument suggests overall that the federal government is not a focused cluster development player. Moreover, it is not engaged in terms of policy development, or coordinating policy development, among the three levels of government. Instead, the federal government tended to take a business climate approach rather than a focused cluster development approach, which does not help the city or municipality per se. The evidence for the third argument suggests that this argument is borne out broadly speaking. Several of the interviewees indicated that Toronto has to be treated differently when it comes to the development of such cluster policy, given the fact that it has to deal with issues of scale and coordination. And this does not mean just the City of Toronto proper, but also the Greater Toronto Area, the GTA. This is the case because arguably it is only in the major cities that one truly finds all of the necessary critical ingredients that can come together to produce a cluster-related innovation policy.

Thus the results of our empirical research clearly indicates that Canada’s innovation and related cluster policy architecture is going to have to change if Canada is to live up to its innovation policy and cluster development potential in the 21st century.
Local Government and Cluster-Related Innovation Policy:
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<td>A&amp;D</td>
<td>Aerospace and Defence</td>
</tr>
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<td>AAP</td>
<td>Aerospace Action Partnership</td>
</tr>
<tr>
<td>ACWU</td>
<td>Amalgamated Clothing Worker’s Union</td>
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<tr>
<td>AIAC</td>
<td>Aerospace Industries Association of Canada</td>
</tr>
<tr>
<td>AIDC</td>
<td>Apparel Industry Development Council</td>
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<tr>
<td>AMIS</td>
<td>Advanced Manufacturing Investment Strategy</td>
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<tr>
<td>ARI</td>
<td>Accounts Receivables Insurance</td>
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<td>AVIC</td>
<td>Aviation Industries of China</td>
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<td>BIA</td>
<td>Business Improvement Areas</td>
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<td>CAF</td>
<td>Canadian Apparel Federation</td>
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<td>CAGR</td>
<td>Compound Annual Rate</td>
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<tr>
<td>CANTEX</td>
<td>Canadian Textiles Program</td>
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<td>CATIP</td>
<td>Canadian Apparel and Textile Industries Program</td>
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<tr>
<td>CED-Q</td>
<td>Economic Development for the Quebec Region</td>
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<td>CFI</td>
<td>Canadian Foundation for Innovation</td>
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<td>CIRB</td>
<td>Canadian Industrial Renewal Board</td>
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<td>CISP</td>
<td>Community Investment Support Program</td>
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<td>CME</td>
<td>Canadian Manufacturers and Exporters</td>
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<td>CRA</td>
<td>Canada Revenue Agency</td>
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<td>CRC</td>
<td>Canada Research Chairs</td>
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<td>CSTA</td>
<td>Council of Science and Technology Advisors</td>
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<td>CUFTA</td>
<td>Canada United States Free Trade Agreement</td>
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DIPP
DND
DOD
DPSA
EDC
ESL
EU
FCM
FDCC
FED DEV
ONTARIO
FIHRAC
FILC
GATT
GILC
GOA
GTA
GTMA
IC
ICCI
ICT
ILGWU
IRB
ITA
Defence Industry Productivity Program
Department of National Defence
Department of Defense
Defence Production Sharing Agreement
Export Development Canada
English as a Second Language
European Union
Federation of Canadian Municipalities
Fashion Design Council of Canada
Federal Economic Development Agency for Southern Ontario
Fashion Industry Human Resources Adjustment Committee
Fashion Industry Liaison Committee
General Agreement on Tariffs and Trade
Garment Industry Liaison Committee
Global Opportunities for Associations
Greater Toronto Area
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Industry Canada
Invest Canada Community Initiatives
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Industrial Regional Benefits
Industrial Technology Advisors
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<th>Description</th>
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<tr>
<td>LCA</td>
<td>Large Commercial Aircraft</td>
</tr>
<tr>
<td>LCD</td>
<td>Low Cost Developed Countries</td>
</tr>
<tr>
<td>LDC</td>
<td>Least Developed Countries</td>
</tr>
<tr>
<td>MRO</td>
<td>Maintenance, Repair and Overhaul</td>
</tr>
<tr>
<td>NABST</td>
<td>National Advisory Board on Science and Technology</td>
</tr>
<tr>
<td>NAFTA</td>
<td>North American Free Trade Agreement</td>
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<tr>
<td>NASA</td>
<td>National Aeronautic and Space Administration</td>
</tr>
<tr>
<td>NGOJF</td>
<td>Next Generation of Jobs Fund</td>
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<tr>
<td>NRC-IRAP</td>
<td>National Research Council of Canada’s Industrial Research Assistance Program</td>
</tr>
<tr>
<td>NSERC</td>
<td>Natural Science and Engineering Research Council</td>
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<tr>
<td>NSI</td>
<td>National System of Innovation</td>
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<td>OCRI</td>
<td>Ottawa Centre for Research and Innovation</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
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<tr>
<td>OEM</td>
<td>Original Equipment Manufacturers</td>
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<tr>
<td>PEMD</td>
<td>Program for Export Market Development</td>
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<td>PWGSC</td>
<td>Public Works and Government Services Canada</td>
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<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>S&amp;T</td>
<td>Science and Technology</td>
</tr>
<tr>
<td>SADI</td>
<td>Strategic Aerospace and Defence Initiative</td>
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<tr>
<td>SDI</td>
<td>Aerospace and Defence Supplier Development Initiative</td>
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<tr>
<td>SME</td>
<td>Small and Medium-sized Enterprises</td>
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<td>SODP</td>
<td>Southern Ontario Development Program</td>
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<td>Acronym</td>
<td>Description</td>
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<tr>
<td>SR&amp; ED</td>
<td>Scientific Research and Experimental Development Program</td>
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<td>TEDCO</td>
<td>Toronto Economic Development Corporation</td>
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<tr>
<td>TFI</td>
<td>Toronto Fashion Incubator</td>
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<tr>
<td>TPC</td>
<td>Technology Partnerships Canada</td>
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<tr>
<td>TPC-IRAP</td>
<td>Technology Partnerships Canada’s Industrial Research Assistance Program</td>
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<tr>
<td>TRRA</td>
<td>Toronto Regional Research Alliance</td>
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<tr>
<td>WDA</td>
<td>Winnipeg Development Agreement</td>
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Finally, I would like to dedicate the completion of this dissertation to the memory of my parents who never lived to see this day.
INTRODUCTION

The literature on innovation policy and innovation suggests that cities are becoming an increasingly important site for innovation. In Canada, nearly 80 per cent of the population lives in cities; and some 64 per cent of the entire population lives in the country’s twenty-seven large and mid-sized metropolitan areas (Bradford, 2004:72). Given these facts, it is not surprising that researchers tell us that cities are becoming increasingly important engines of economic prosperity. In short, it is our cities that represent the natural home for innovation clusters to take root, given the fact that our cities possess the requisite population density, thick labour markets, organizational talent and research infrastructure to make cluster creation possible.

Michael Porter defines a cluster as a “geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities” (Porter, 1998:199). In specific terms, these include concentrations of interconnected companies, suppliers, service providers, manufacturers of related products, and finally governmental and other institutions, such as universities, vocational training institutions, national laboratories, trades associations and collaborative research institutes (Wolfe and Lucas, 2005:6).

It is not surprising then that within the broad scholarly literature on innovation, a number of scholars, beginning with Michael Porter, have identified clusters as a key conceptual framework for supporting, or contributing, to the development of groups of
innovative firms. Moreover, economic development officials at the municipal level in a number of major Canadian cities, such as Calgary, Edmonton, Ottawa, Toronto (ICF Consulting, 2004: 4) and Montreal (Montreal Metropolitan Community, 2005), have used the cluster framework as a focus of their efforts to support the growth and development of these innovative firms.

**Purpose and Contributions**

Despite the above initial points, there is relatively little focused academic literature on local government per se and its role in developing cluster-related innovation policy. The purpose of this dissertation is to help fill that gap by undertaking an analysis of how cluster-related innovation policy development occurs in the City of Toronto. The analysis focuses as much as possible on cluster-related innovation policy in order to differentiate it from other broader and earlier conceptions of innovation policy.

The focus of the analysis is on local government and more particularly the City of Toronto, and thus it must be stressed from the outset that the analysis does not constitute a full analysis of all the potential players in cluster development. For example, it does not probe the roles and links with universities and community colleges, or with financial capital. There is analysis of business roles in a local government context. To help fill the local government analytical gap identified above, the analytical framework developed has selected three reasonably tight local government-relevant variables: leadership, local government finance and multi-level governance programs and activities. Empirically, this is done through a comparative analysis of two Toronto clusters, the aerospace cluster and the fashion cluster, set in the context of the longer term histories of these industries.
This dissertation makes two main research contributions. First, it offers a more focused critical empirical examination of cluster-related innovation policy development at the municipal government level in Canada through two Toronto cluster case studies. Most academics and policy makers in Canada have devoted their time and attention to analyzing the problem of innovation policy from a national or broadly defined regional perspective. At the same time, cluster studies have focused on the general spatial characteristics and overall operations of innovative clusters in Canada. By undertaking a systematic study of this topic, the thesis supplies a more focused local government emphasis.

The second more conceptual contribution is the local government-relevant analytical framework that is developed and employed. It draws needed analytical attention to the particular interwoven dynamics of the three variables involved, as a way of understanding cluster-related innovation policy development in two quite different kinds of clusters.

**Research Question and Main Arguments**

The primary research question explored is: How have the concepts and practices of cluster-related innovation policy at the local level changed in the City of Toronto roughly in the last twelve years?

Three main arguments are advanced and examined. The *first argument* is that cluster-related innovation policy at the local government level, though it has the potential for eventual success, and though it is often touted as providing a very effective mechanism for leveraging a city’s limited amount of fiscal resources, suffers from a lack of conceptual clarity because it is embedded in a range of other related policies described
and promoted in other ways including economic development policy, prosperity policy, competitiveness, and industrial sector policies.

The second argument is that cluster-related innovation policy at the local government level is likely to have only limited efficacy and impacts unless there are explicit sources of multi-level governance financial support and strong multi-level governance coordination.

The third argument is that cluster-related innovation policy at the local level cannot be based on a one size fits all approach given that mega-cities such as Toronto face different challenges of scale and coordination, and given that clusters such as aerospace and fashion exhibit diverse innovation characteristics and coordination and cluster formation challenges.

Analytical Framework and Methodology

Table 1 below previews the basic conceptual roots and analytical framework for the analysis consisting of three literature streams, three variables and the two cluster case studies.
Table 1: Conceptual and Research Framework at a Glance

Three Main Literature Streams

- Innovation Policy and Innovation
- Local Government
- Multi-Level Governance

Analytical Framework Variables for Analyzing Cluster-Related Innovation Policy at City Level

- Leadership
- Local Government Finance
- Multi-Level Governance Programs and Activities

Two Cluster Case Studies

- Aerospace Cluster
- Fashion Cluster

The three variables emerged from a preliminary look at the three streams of the literature drawn upon in the research but also from the early stages of empirical research.

The Leadership variable is important to understand given the fact that the nature of leadership is diverse in different political, institutional and organizational settings (Jones, 2007; Selznick, 1984; Wildavsky, 2004; Schneider and Teske, 1992). Chapter 2 will show how leadership has diverse meanings in different political, institutional, and organizational contexts and in local government and community settings. For the purposes of this study, it is important in particular to understand the Leadership variable because the structure and the operations of municipal government are different from that
of the federal and provincial government. There are no Ministers of the Crown, and there is no Cabinet in municipal government; moreover, the overall pattern of decision making and policy making is also different in municipal government.

Therefore, from the point of view of municipal government, the Leadership variable was chosen because it leads to the following important question: Who exercises the leadership roles within municipal political institutions with respect to innovation policy and the formation of a cluster strategy? Does the Mayor exercise this leadership role alone, or do individual bureaucrats have an important role to play here as well? What is the role of other elected politicians, including committee chairs of the Economic Development Committee, in the development of cluster-related innovation policy? What other actors were involved in this process?

Another, equally important variable that needs to be examined is the Local Government Finance variable. It is important to understand that the city has limited financial resources, and these financial resources are restricted to a collection of the property tax, along with some grants, and tax breaks, from the other levels of government. So the goal and the challenge for the City is that it needs to maximize the Federal and Provincial resources being directed to the City of Toronto. A second issue that is closely aligned with the first is the importance of leveraging the city’s financial base.

The key questions that need to be further examined regarding the Local Government Finance variable are as follows: How has the City tried to deploy its resources for cluster-related innovation policy? What mechanisms have they employed to try and leverage their financial base? How successful has this strategy been for the City?
Multi-Level Governance Programs and Activities is the final variable that needs to be further analyzed. As noted, cities in Canada operate under a system of constrained power that has its roots in the constitutional division of powers. Cities were purposefully denied any real constitutional status; as such, they were made into creatures of the provinces which determined just exactly what other legislative and fiscal powers cities would get from the province. Given this fact, within proscribed limits, cities are allowed to deal with issues of innovation.

On the surface this situation looks bleak; however, even though Canada is a federal system of government, this does not mean that all jurisdictional divides are water tight. When it comes to matters of cluster-related innovation policy, both the federal and provincial government have an important role to play. And in order for the City to tap into innovation, it is imperative that the federal and provincial government be present and actively engaged. Key questions that will need to be investigated within the Multi-Level Governance Programs and Activities variable are the following: What are the key federal and provincial innovation programs that are available and that the City needs to draw upon to implement its cluster-based innovation policy? Who are the important players in this enterprise? Who are the key people the City works with within the other levels of government to bring this about?

However, as important as these variables are, they are only important in relation to the case studies that have been chosen. These two case studies were chosen to show how different indicators formed to produce different cluster-related innovation policy challenges and outcomes. They were selected on a “most different” selection basis rather than a “most similar” basis (Flyvbjerg, 2006; Stake, 1995).
The Toronto Aerospace Cluster represents a traditional manufacturing sector that may be facing a decline in importance in the coming years. The aerospace sector is one of Ontario’s leading high technology sectors. Exports comprise 75 per cent of the sector’s output. It contributes strongly to the provincial trade balance of payments, and is one of the few high technology sectors in which Ontario has a trade surplus. This sector is an important contributor to the Ontario economy, accounting for 1.5 per cent of the provincial gross product; it has significant linkages to supplier industries, including computer software, metalworking and telecommunications and materials (Ontario Aerospace Ministerial Advisory Committee, 1994:15). However, over the past number of years, the aerospace industry has been impacted by a worldwide slowdown, intense competitive pressure and rapid technological change. It is important to conduct a detailed analysis of this sector to see if new strategies can enable it to survive and thrive in the future.

Finally, The Toronto Fashion Cluster is indicative of a design industry sector that some think will, more and more, be the type of cluster that will generate wealth for the City of Toronto in the future. This can clearly be seen by the way in which the City of Toronto has tried to develop this cluster. Once the City realized that recently graduated designers could not obtain a foothold upon the employment ladder in their chosen career path, they decided to create a place for them to begin this journey. To this end, the City, through its sister corporation, TEDCO, the Toronto Economic Development Corporation, purchased a building in the City, equipped it with state-of-the-art design equipment: sewing machines, cutting machines, pattern-making machines, etc. and then the City set to work to create the conditions, within this building, to allow this designer talent to

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flourish. A mentorship program was also established that linked young designers with established designers who were already a success in their field. In sum, the Toronto Fashion Cluster combines what some see as the best elements of the learning economy: creativity and innovation.

Methodology

A qualitative research methodology is employed, built around the analysis of two case studies using both documentary evidence and sources and confidential interviews. The first technique consists of a systematic exploration of existing documentation from the City of Toronto on their clusters. Federal and provincial documents are also utilized in the case study analysis, as well as in some aspects of the literature review. The second complementary technique employed consists of semi-structured confidential interviews. The interviews are used for a detailed investigation of participant views of cluster-related innovation policy, and policy processes, during the twelve-year period in the two case study clusters. Both aspects of the overall methodology, including the choice of case studies are discussed in more detail in Chapter 1.

The analysis is also placed within historical context through the development of two historical chapters. Chapters 3 and 4 showcase the development of these industries under earlier kinds of sectoral, industrial, trade and social public policy prior to the case study analysis of each cluster, thus providing a greater understanding of each industry’s strengths and weaknesses as it enters the cluster-related innovation policy era.

Literature Streams

Each of the three literature streams highlighted here but examined in detail in Chapter 1 is important for its own specific reasons. The first literature stream deals with the
literature on *innovation policy and innovation*; and provides a sense of broader debates and theories about such policy and about the nature of innovation so that the dissertation’s ultimate focus on cluster-related innovation policy emerges more clearly.

The second literature stream focuses on *local government* and its key characteristics and problems including some of the different aspects of political leadership and institutional structure, including the roles and interactions among the mayor, the city council, and the city bureaucracy.

The third literature stream is devoted to understanding *multi-level governance institutions* as a growing institutional relation both in a EU and comparative and Canadian federalist context and with regard to cities, the federal government, and the province.

In addition, as discussed in Chapter 1, the literature review draws some contextual conceptual links to path dependency theory and its useful discussion of temporal and inertial dimensions in the analysis as a whole. These include institutions, values, discourse, and approaches that, once established historically, become difficult to change. These issues are also drawn out briefly in Chapter 8’s conclusions.

Together, the three streams provide a reasonable and relevant underpinning that helps in the construction of the research framework and design, the research on the two cluster case studies and also the broader historical context in Part 1 of the thesis.

**Cities in the Context of Municipal Government and Canadian Federalism**

While cities and the City of Toronto are the ultimate research focus, the role of municipal government needs a brief contextual description in relation to three features of its origins and evolution (to be discussed further in Chapters 1 and 2): (1) the origin of
the municipality; (2) the way it relates to and can take advantage of its relationship to the other two levels of government; and (3) the role of the municipality in local government.

For the purpose of this dissertation, local government includes “both municipalities and all other governmental entities with territories smaller than provinces that have their own governing bodies with some capacity for autonomous decision-making” (Sancton, 2011:3).

Canadian municipalities per se evolved and descended from English municipal corporations. In Canada, this process began when a royal charter created the first municipal corporation in St. John, New Brunswick in 1785; and in 1849, the pre-Confederation Province of Canada created the Municipal Act, better known as the Baldwin Act, which formed the basis of Ontario’s municipal government for over a century (Sancton, 2011:5). Recently, two major changes to the legislative process have occurred. On January 1, 2003, a new Municipal Act was introduced, and in 2007, a new City of Toronto Act took effect. The purpose of both of these Acts is to provide the municipality with more legislative and fiscal powers (Siegel, 2009:24).

The legal framework that comprises Canada’s written federalist constitution consists of two major documents: the Constitution Act, 1867 (formally known as the British North America Act) and the Constitution Act, 1982, along with its amendments. These documents make no specific reference to the term ‘local government’ or to ‘municipality’. But the term ‘municipal’ is mentioned two times in section 92 of the Constitution Act, 1867. Municipal institutions are listed in subsection 8 “as one of the exclusive provincial powers” and subsection 9 states that “Shop, Saloon, Tavern, Auctioneer, and other Licences in order to the raising of a Revenue for Provincial, Local,
or Municipal Purposes” will be allowed. And Subsection 16 states that provincial jurisdiction can pertain to “Generally all Matters of a merely local or private Nature in the Province” (Sancton, 2011:26). Canadian municipalities are thus cast as “creatures of the provinces” (Sancton, 2011:27). It is the municipalities that rely upon the provinces for their legal existence, and it is the municipalities that also enact some provincial laws in general, apart from their own bylaws.

Gradually, within Canada all municipalities have legal authority over the following specific functions: fire protection, animal control, land-use planning and regulation, building regulation, economic development, tourism promotion, public libraries, parks and recreation, cultural facilities, licensing of businesses, emergency planning and preparedness, rural fences and drainage, and the regulation and provision of cemeteries. In urban municipalities, public transit, taxi regulation and water purification and distribution are also additional responsibilities.

The province of Ontario has some additional responsibilities as well: Ontario is responsible for providing social services, social housing and land ambulance services (Sancton, 2011:23-24). What the above list strongly suggests is that apart from anything else, the specific function of local government, within municipalities, is to plan, regulate, protect and provide for infrastructure services for our so-called built environment (Sancton, 2011:24).

The constitutional relationship that the federal government has with the municipalities is a very different one from that of the provinces. The fact of the matter is that the federal government has no constitutional responsibility for Canadian municipalities. That said, it would be incorrect to assume that the federal government is irrelevant to the
municipalities (Sancton, 2011:27). As is shown further in Chapter 1, the municipalities have been very active over the years in asking for money from the federal government for various things that directly affect the municipal government.

A municipal organization that has spearheaded this effort is the Federation of Canadian Municipalities (FCM). This organization is constantly lobbying the federal government to direct money to municipal needs. When Paul Martin was Prime Minister, his 2004 budget gave municipalities a one hundred per cent rebate on their sales tax payments. This benefit was estimated to save the municipalities $7 billion over ten years. In the 2005 budget, this same government gave the municipalities $5 billion in transfers from the federal share of the gas tax (Young and McCarthy, 2009:349). The FCM was also responsible for getting the federal government to give the municipalities $550 million for the Green Municipal Fund to enhance community sustainability (Sancton, 2011:37). It is in all these ways that the federal government contributes to benefit Canadian municipalities and to take part in nation building through such efforts even though they do not have a direct constitutional relationship with the municipal level of government.

**Initial Key Definitions**

We need to highlight, as well as also explain, some initial key definitions that will be used throughout the rest of this thesis. In order to bring absolute clarity to the situation, a brief explanation needs to be given about two specific words: (1) ‘cluster’ and (2) ‘sector.’

In talks and interviews with City officials, it became apparent that they often did not distinguish between the use of the terms cluster or sector; they often used these terms
interchangeably because in their minds they meant the same thing. However, these two words analytically do not mean the same thing, and this has to be clarified with proper definitions.

Along with the definitions that follow below, it should be stated that, in general, whenever the word cluster is used in the thesis we are referring to a strategy for the overall sector that requires the participation of not just firms, but also all of the other policy actors the definition describes.

But when the term sector is employed, we are using the term to describe some technical or industrial aspect of the stated sector under discussion at that time.

Other definitions will be added as the analysis proceeds. The term policy in this dissertation refers to “statements of purpose and intent” which are articulated and discussed by the various levels of government, in the many places of debate where such things take place. These policies potentially make use of all the key policy instruments of taxation, spending, regulation and persuasion (Pal, 2006; Howlett and Ramesh, 2003).

Cluster-related innovation policy refers to innovation policy that focuses on the development of clusters of complex non-linear interaction involving governments, industry associations, universities and colleges, and financial capital in given regional/local spheres.

Innovation policies refer to government policies which are designed to make use of the best S&T in order to produce new products, as well as new production processes, along with the innovative organizational approaches and management practices that will support these kinds of activities (Wolfe, 2009; Phillips, 2007; Doern and Levesque, 2002; Crocker and Usher, 2006). There is in Canada, as well as in other countries, a growing
trend for governments to subsume Science and Technology policies, along with research policies, into broader innovation policies.

Clusters are defined as a “geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities” (Porter, 1998:199). These include concentrations of interconnected companies, suppliers, service providers, manufacturers of related products, and finally governmental and other institutions, such as universities, vocational training institutions, national laboratories, trade associations and collaborative research institutes (Wolfe and Lucas, 2005:6).

Research policy is defined as policies that are aimed at “the funding, conduct, and dissemination of basic and applied research in the natural, health, and social sciences” (Doern and Stoney, p. 8). That being said, there is a tendency today for this term to be used interchangeably with other concepts such as science policy, or science and technology policy; sometimes commercialization policy is also included within this broad mix of concepts. Finally, the term knowledge is used interchangeably by many people to mean research; it is also used to indicate the spreading of that research to multiple users.

A Sector is defined under the North American Industrial Classification System (NAICS) as a grouping that draws together single and vertically-integrated companies and enterprises engaged in the production of similar product groups (www.statcan.gc.ca/subjects-sujets/standard-norme/naics-scian/2007/introduction-eng.htm). Vertical sectors were also until recently the dominant approach to industrial policy in Canada and elsewhere and dominated the structure of Industry Canada and its predecessor industry ministries (Doern, 1996) until after the free trade agreements of the
late 1980s and early 1990s. Familiar sectors included those such as the auto,
telecommunications, textile and aerospace sectors to name only a few.

**Overview of Chapters**

The dissertation is divided into two major parts, and the entire thesis comprises eight chapters. Part One addresses the theoretical, contextual and conceptual aspects of innovation, as well as the research design framework and methodology. Chapter 1 provides the Literature Review of the three streams of literature that underpin the analysis as well as the above mentioned links to issues of path dependency theory. It also examines the main themes that are pertinent to an understanding of the central research question.

Chapter 2 examines and discusses the three part analytical framework that underpins the research. The central research question will also be restated and contextualized in this chapter, along with the three central arguments. Finally, the case study rationale is discussed in more detail, and a more detailed discussion of the research methodology is also included.

Chapter 3 examines the historical evolution of the Toronto aerospace sector, and Chapter 4 explores the historical evolution of the Toronto fashion sector.

Part Two provides the core empirical analysis. Chapter 5 and Chapter 6 examine two cluster case studies through which it will be possible to observe how cluster-related innovation policy develops. The three variables of Leadership, Local Government Finance and Multi-Level Governance Programs and Activities will be used to help understand and better explain how cluster-related innovation policy has changed over the twelve-year period.
Chapter 7 compares the two City of Toronto cluster case studies in relation to the three part analytical framework.

Chapter 8 offers final overall conclusions and commentary, and suggests areas for further research in the light of the contribution and focus of this dissertation.
Chapter 1
CORE LITERATURE STREAM REVIEW

INTRODUCTION

The purpose of this chapter is to undertake a focused review of the three streams of literature that underpin the analysis: innovation policy and innovation, local government and multi-level governance. In addition, the chapter draws some useful contextual conceptual links to path dependency theory. This review will also further help set the context for the study and will help shape the author’s analytical framework, which is set out in detail in Chapter 2.

The literature reviewed is primarily academic literature, but it also includes reports and studies published by governments, federal, provincial and local, as well as individual government agencies and relevant interest groups. The chapter is organized into three sections, one on each literature stream.

INNOVATION POLICY AND INNOVATION

Innovation policy has been the subject of vigorous debate within the academic literature. And over time this debate has evolved, and centred upon, two main conceptual theories: the linear S & T, or R & D, model of innovation and the non-linear, network-like cluster theory of innovation. The S&T model has been very important federally, in Canada and elsewhere. And even though it has been the subject of criticism, it has not been totally replaced by the non-linear model of innovation.
There are many federal programs which were, and still are, justified by both the linear and non-linear views about what innovation policy is and what it ought to be. For example, in Canada the federal government provides S & T innovation funding for universities, and the federal government may not have clusters in mind at all, but the funding may still contribute to the creation of clusters. So in order to fully appreciate the complexity of the innovation process, we need to analyze and describe these two conceptual debates within the academic literature.

**The Development of the Linear Model**

One of the first theoretical frameworks that was developed for understanding science and technology and how it relates to the economy was the linear model of innovation. This model stipulates that innovation starts with basic research, which then leads to applied research and development, and then to production and diffusion. This linear approach was given emphasis in a U.S. report by Vannevar Bush during World War II and became the model for American S&T policy overall (Crow, 1994; Guston, 2000).

The first stage went from the beginning of the twentieth century to 1945. This was the era that was characterized by the devotion to pure science, and it was during this time that people began developing a case for a causal link between basic research and applied research. The second stage lasted from approximately 1945 to 1960. During this time a third term was added to the model, namely development. With the addition of this new term to the model, the creation of the standard three-stage model of innovation had become a reality (Godin, 2006).

The final stage, which began as early as the 1950s, saw the further extension of the model into areas that were considered to be non-R&D activities such as production and
diffusion. It was the economists from the business schools who were responsible for the extension of the model at this stage of its development (Godin, 2006).

Even though research has been measured since the 1920s, the question “What is research?” more often than not was left to the person filling out the research grant application to decide. We owe a debt of gratitude to the British scientist J.S. Huxley for developing the first formal taxonomy of research. This taxonomy had four categories: background, basic, ad hoc and development (Huxley, 1934). The first two categories defined pure research. Background research was research that had no immediate practical objective in mind; basic research was research that was very fundamental and it did have an applied objective in mind. In Huxley’s mind, ad hoc research was applied research, while development meant what we mean by the term today: the ability to translate laboratory findings into commercial practice (Godin, 2006:650). Even though Huxley developed these definitions, he never conducted any direct measurements. His work did, however, influence other research organizations, especially the OECD.

The work that Huxley started was improved upon in the 1950s and the 1960s by organizations such as the United States National Science Foundation (NSF) and the OECD when they developed their methodological conventions. In 1951, the NSF was compelled under the force of law to measure scientific and technological activities in the U.S. (Godin, 2003b). As a result of this mandate, the NSF developed a series of surveys on R&D based on precise definitions and categories. In time, industrialized countries built upon the NSF definitions when they adopted the OECD Frascati manual in 1963. This manual was developed to help countries with their measurement efforts by offering methodological conventions that allowed international comparisons (Godin, 2006:648).
The NSF was very active on statistical work as well. It produced the first, ever, national data on research. It took a decade, however, for national standards to appear. For example, until 1957, development was merged with applied research, and until 1959, statistics on development were neither presented, nor discussed, in reports on industrial research. However, there eventually came a time when the three components of research were finally separated out along the following lines provided by their own definitions:

- **Basic or fundamental research:** Research projects that represent original investigation for the advancement of scientific knowledge and that do not have specific commercial objectives.

- **Applied research:** Research projects that represent investigations directed to discovery of new scientific knowledge and that have specific commercial objectives with respect to either products or processes.

- **Development:** Technical activity concerned with non-routine problems that are encountered in translating research findings or other general scientific knowledge into products or processes.

Even though the NSF’s categories were developed for statistical purposes, the important point to note is that these three categories also were used to describe the stages in the process of innovation. The description of this process ended with the depiction of the three-stage linear model of innovation: Basic research—Applied research—Development (Godin, 2006:653-654).

Thus, by the early 1960s, the majority of countries had more or less similar definitions of research and the components of research (Gerritsen, 1961, 1963). Now research had come to be defined as R&D which was composed of three types of activities (Godin,
The next development to occur was the fact that the OECD decided to take up the challenge of conventionalizing and standardizing the definitions. In 1963, the member countries of the OECD adopted a methodological manual for conducting R&D surveys as well as for producing statistics for indicators and policy targets like the Gross Expenditures on R&D/Gross Domestic Product (GERD/GDP) ratio. Moreover, the Frascati manual also included precise instructions about separating research from non-research activities, as well as separating development from production (Godin, 2006:654).

A parallel development that occurred in the 1960s was led by a group of people who began working on a series of models of innovation. All of the people who were engaged in this process were developing models that defined innovation as a sequence that went from research, or invention, to commercialization and diffusion. Soon other academics from management schools were involved in this research and they were very influential in promoting the development of these models (Godin, 2006).

Today, however, despite its widespread use, the linear model of innovation has had to contend with its critics and opponents. As far back as the 1960s, many criticisms were put forward about the model, many of which were concerned about the linearity of the model in general (Schmooker, 1966; Price and Bass, 1969; Myers and Marquis, 1969). Other scholars feared that the linear model distorted the reality of innovation in several ways. For these scholars the biggest problem with the linear model is that there are no feedback loops, or pathways, within the development processes. There are also no feedback pathways from sales figures or from individual users. Yet all of these forms of feedback are necessary and essential for the evaluation of performance, for the next steps
forward, and for the assessment of any competitive position for the future. In short, feedback is an essential part of the development process (Kline and Rosenberg, 1986:286). Despite all of these criticisms, the linear model of innovation is still the subject of academic analysis, and it is still often used by governments when they describe their policies and their various types of funding for science and technology activity.

Although there have been attempts to modify or replace the linear model over the years, it must be stated that all of these attempts, to date, have met with limited success. Critics of these alternative models of innovation have stated that these other models look more like a piece of modern artwork rather than a useful analytical framework. Moreover, attempts to measure anything within these new interactive models have not been very successful. The development of indicators and statistics, as well as the development of indicators on knowledge flows between economic sectors, are still in their developmental stages (Godin, 2006:660). That the linear model of innovation still continues to be used should come as no surprise to people who are concerned about such problems. As Thomas Kuhn has stated, we do not abandon a model until we have a better model to put in its place (Kline and Rosenberg, 1986:286).

But even though the Government of Canada still upheld, and upholds, the linear model of innovation, this did not prevent the winds of change from blowing across the political landscape and bringing about new directions in government policy, thinking and discourse.

During the summer of 1994, the Government of Canada, under the leadership of the Liberal Party leader and Prime Minister, Jean Chretien, ordered a comprehensive review of federal S&T policy. The National Advisory Board on Science and Technology
(NABST) was asked to assess the results of the independent studies and public consultations that had formed the basis of this S&T review. In the report that NABST completed for the Government of Canada, they stated that the rapidly changing global environment demanded “new ways of conceptualizing S&T, new ways of performing S&T, new ways of governing it and new ways of evaluating outcomes” (Doern and Kinder, 2007:34; NABST, 1995:5). And even though NABST thought that “the federal role in performing S&T should be smaller and more focused,” they also thought that “the federal government should promote partnerships and collaboration among S&T stakeholders” (NABST, 1995:iv-vi; Doern and Kinder, 2007).

The important thing to note about this report is that it indicates the beginning of a shift in thinking about S&T policy at the federal level in Canada. For the first time ever, government laboratories were viewed as being a part of a national innovation system. The federal S&T strategy that was released in 1996 reflected this same thinking. While it is true that the strategy did not speak about government labs in any great detail, it did reflect this shift in government thinking about the need for a new approach to conducting S&T policy in Canada. It was during this time period that the innovation systems approach began to be favoured and accepted by the federal government and by other OECD countries more generally (Doern and Kinder, 2007).

In 1998, the Chretien Liberal government created the Council of Science and Technology Advisors (CSTA). The CSTA was established to better integrate and improve the management of federal S&T. In 1999, CSTA produced its own report entitled Building Excellence in Science and Technology (BEST). In specific terms, the CSTA recognized that “the context for government S&T had changed and was continuing
to change” (quoted in Doern and Kinder, 2007:37). Therefore, the CSTA recommended that government “implement and fund new models for S&T that move way from a vertical approach to a more horizontal (i.e., across government and the innovation system), competitive, multi-stakeholder approach (CSTA 1999:28; Doern and Kinder, 2007:37). What mattered the most in all of this was the exchange of knowledge and information and the co-operation and forging of partnerships between government, business and the universities (Government of Canada, 1996:4).

This federal government shift in policy sets the stage for our consideration of the second major debate within this literature review, namely the non-linear cluster-network theory of innovation which was increasingly advanced internationally as well.

**National Innovation Systems and the Non-Linear Cluster Networked Theory of Innovation**

The cluster concept is really related to a much larger family of “systems of innovation” approaches “which have systems of analysis as their common starting point” (OECD, 1999:414). The national system of innovation approach was first introduced in the late 1980s. The term national system of innovation (NSI) was advocated by Christopher Freeman (1987). He defined the (NSI) as “the network of institutions in the public and private sectors whose activities and interactions initiate, import and diffuse new technologies” (Freeman, 1987:1). Other scholars of innovation also added their perspective to this debate. Lundvall has argued that the “structure of production” and “the institutional set-up” are the two most important factors that “jointly define a system of innovation” (Lundvall, 1992:10).

In contrast, Nelson and Rosenberg have argued that it is organizations that support R&D, or organizations that support the creation and distribution of knowledge, that are the main source of innovation (Nelson and Rosenberg, 1993:5, 9-13). Lundvall’s broader
approach recognizes that organizations are “embedded in a much wider socio-economic system in which political and cultural influences, as well as economic policy, help to determine the scale, direction and relative success of all innovative activities” (Freeman, 2002:195).

Both Nelson and Lundvall define the (NSI) in terms of the overall factors which influence the innovation process. However, they emphasize different factors within their respective definitions. This just serves to indicate the fact that there is still not any agreement on a common standard definition of the term national system of innovation.

In using the (NSI) approach, the focus is on the national system. This simply serves to indicate the obvious: national economies differ with regard to the structure of their production system, along with their general institutional set-up. The components of the (NSI) system are, however, the same wherever such a system is located. The components of the system are as follows:

- Internal organizations of firms
- Inter-firm relationships
- Role of the public sector
- Institutional set-up of the financial sector
- R&D intensity and R&D organization

These elements when looked at through the prism of an entire system provide the user with a number of strengths that may not be entirely present in the more traditional linear model of innovation. Three of these strengths will suffice to illustrate our point. First, the (NSI) model of innovation emphasizes non-linearity and interdependence in the innovation process. The reason why the emphasis is placed on the above reflects the fact that firms normally do not innovate in isolation. Rather, they interact with other...
organizations, and these complex interactions are more often than not characterized by “reciprocity and feedback mechanisms in several loops” (Edquist, 2005:185).

Second, the (NSI) approach places innovation and learning processes as the central focus of attention and interest. Here the emphasis is on learning because innovation is thought to be a matter of producing new knowledge, or else combining existing knowledge in new ways. This focus on learning and knowledge is what distinguishes the systems approach from other approaches to innovation.

Finally, the (NSI) approach uses historical and evolutionary perspectives. Processes of innovation develop over time, and they involve many factors and make use of many feedback processes. When looked at in this way they can be characterized as evolutionary. Therefore, an ideal system of innovation cannot exist (Edquist, 2005: 184-185).

In addition to these basic contours, innovation theory, policy and research has been extended to a focus on particular aspects of innovation both in products such as biotechnology and the human genome and in terms of linked issues such as the nature of intellectual property rights and changing research funding and network approaches (Creutzberg 2006; Wolfe and Gertler 2004; Castle 2009; Castle and Phillips 2011; Doern and Stoney 2009; Atkinson-Grosjean 2006; Doern and Prince 2011).

This brief look at the historical development of the national innovation system should make it easier to understand the inner workings of the cluster-network theory of innovation. As has been previously stated, the non-linear cluster-network theory of innovation is a systems based model of innovation, so many of the factors should be the same. But a cluster-network model of innovation requires a cluster policy if it is to be
effective. And a cluster policy will be a reflection of the systems approach to innovation. We shall now turn our attention to this matter.

Cluster theory is also network based and non-linear in nature, but it also involves the need to pay attention to related literature on innovation per se rather than just innovation policy. This sub-section highlights the core features of the literature and focuses on four primary concerns: the core features of cluster theory; why the geography of space is important for the innovation process; how this spatially important element of innovation is related to the issue of tacit knowledge; and why and how tacit knowledge is important for the relationship that exists between tacit knowledge and knowledge spillovers.

Core Features of Cluster Theory

The conceptual foundations of cluster studies, often cast as agglomeration studies, are found within a diverse group of theories. These theories include: Marshallian theory, location theory, transaction-cost and institutional theory, international business theory, regional studies, and strategic management (Belussi, 2004; Newlands, 2003; Benneworth and Henry, 2004). Indeed, the whole question of how to understand localization economies remains rather unsettled, with theorists trying to explain the agglomeration behaviour of firms in terms of untraded interdependencies, or collective learning, or evolutionary economics involving “economies of scale, path dependence or network formation” (Wolfe and Lucas, 2005:5).

There are, however, two major approaches that stand out and demand further commentary. The first approach, which builds upon the work and tradition of the economist Alfred Marshall, places great emphasis on agglomeration economies and supply-side externalities. Here clusters are viewed as the product of traditional
agglomeration economies. When we say that firms are the product of agglomeration economies, we mean that firms which are located within the cluster benefit from easier access and reduced costs of certain collective resources such as a local labour market for specialized skills, or specialized infrastructure. However, for economists who are considering the problems inherent in agglomeration economies, the focus for them is on what is termed externalities. Marshall (1920) identified three principal sources of external economies: input sharing, labour market pooling, and knowledge spillovers. Input sharing takes place when firms share a local supplier industry. Labour market pooling happens when human capital that possesses special skills is available in a particular location. Knowledge spillovers occur when so-called tacit knowledge diffusion takes place through either deliberate or unanticipated pathways (Wolfe and Lucas, 2005:5). To illustrate this phenomena Marshall has used the example of workers learning to use new technologies.

As important and insightful as the agglomeration approach is to the development of cluster theory, there is yet another variation on this theme that is equally deserving of our attention. The work of Michael Porter is equally compelling because his major concern was to develop a general cluster theory that would be applicable “to a wide range of specialized industrial agglomerations.” These would include the industrial districts of Third Italy, the high-tech regions, and the specialized inner-city enclaves (Asheim et al, 2006:8).

In his book, On Competition (1998), Porter argued that the competitive success of a nation’s export firms depends upon the national competitive diamond. This competitive diamond consists of four sets of factors: firm strategy, structure and rivalry; factor input (supply) conditions; demand conditions; and related and supporting industries (Porter,
An equally important point to understand about the diamond is that the more developed and intense the interactions are between these four sets of factors, the greater will be the productivity of the firms involved.

Porter then further argues that the intensity of interaction within this competitive diamond is greatly enhanced if the firms within the diamond are also geographically localized or clustered (Porter, 1998). Thus we have the scenario whereby clustering enhances innovation, and innovation enhances productivity, and higher productivity raises the competitive advantage of the cluster, thus enabling higher wages and employment (Asheim et al, 2006:10). In Porter’s mind the cluster is the manifestation of the diamond.

The second major approach places the emphasis on the role of knowledge and learning processes in sustaining clusters. This approach also emphasizes the role of spatially sticky tacit knowledge in the formation of a cluster. Two important points emerge here for consideration. First, since a lot of this discussion centres around the idea of knowledge flows, it must be stated that knowledge flows within clusters are not necessarily restricted to the local level. So-called dynamic clusters usually start to develop strong ties, or connections, to other clusters through international linkages in the sharing of that knowledge (Bathelt, Malmberg and Maskell, 2002). Second, it is now widely believed that knowledge spillovers are an important mechanism of learning and innovation within clusters (Wolfe and Lucas, 2005:6).
Innovation and the Geography of Space

Innovation can be divided into four main categories: product, process, organizational and marketing. All of these types of innovation deal with new products or processes, or else they connote new techniques that result in innovation itself.

In recent years, analysis has focused on the ways that innovation gets concentrated in urban centres because of what economic geographers refer to as the geography of space. But in earlier periods, innovation also occurred in agricultural and food development through rural networks between farmers, research stations and agricultural farms established by governments. Thus, within the geography of space, location matters. Innovation is not equally distributed across the entire landscape of a given country, Canada included (Belussi, 2004).

Gertler (1996) has argued that the “performance of the world’s most successful economies” is based upon a foundation of “strong regional economies” which happen to be located in recent decades most often in metropolitan areas (Gertler, 1996:13). Economic growth, if it is to be successful, does not just happen in any location in a serendipitous fashion; the reality is that there is a “distinct geography of growth,” and this distinct geography of growth is “typical of the world’s most innovation-intensive regions.” These sites, in turn, are the primary sites for the production of high quality products (Gertler, 1996:13, Kotkin, 2000).

This unique geographical agglomeration of customers, producers and suppliers that produced these high quality products has come to be referred to as a cluster. As will become apparent, innovation clusters, as defined in the Introduction, play a crucial and significant role in the formation of new knowledge and innovation. This takes place
because of the spatial proximity of the cluster and how that spatial proximity relates to the use of certain types of knowledge.

**Tacit and Codified Knowledge**

The two most important types of knowledge that are crucial for innovation are tacit and codified knowledge. According to Polanyi (1958, 1966), tacit knowledge defies easy definition and explanation. This makes it difficult to exchange this kind of knowledge over long distances. Yet as difficult as it may be to formulate a definition of tacit knowledge, it is vitally important to derive an understanding of this concept so that its application to the innovation process can be better understood. Polanyi thinks that all knowledge begins with the fact that “we can know more than we can tell” (Polanyi, 1966:4). One example that serves to illustrate how this idea manifests itself in a concrete manner is to say that tacit knowledge consists of skills and competencies that can only be transferred to another person by engaging in some form of social interaction (Foray and Lundvall, 1996:21).

Today, the use of tacit knowledge is now framed in a different manner. In the more nuanced context, tacit knowledge derives its meaning from the institutional as well as the social context from which it is produced. The context-specific nature of tacit knowledge “makes it spatially sticky” (Gertler, 2003; Asheim and Gertler, 2005:293; Bathelt et al, 2002:32).

The recent literature on learning regions seems to confirm this viewpoint. The main argument within this literature is that the production and transmission of new knowledge occurs most easily among so-called proximate actors (Breschi and Malerba, 2001:818). Knowledge of this kind gets transmitted most easily via interpersonal contacts and also
through the inter-firm mobility of many skilled workers (Breschi and Malerba, 2001).
The important point that needs to be understood here is the relationship that exists between codified knowledge, tacit knowledge and the growth of the cluster in urban regions.

Over the years as the development of information and communication technology has proliferated, it has become much easier for individuals and firms to access codified knowledge. This has come about as a direct result of the development of the Internet which allows for vast amounts of information to be downloaded onto a personal computer. Today, codified knowledge is knowledge that is easily available. Tacit knowledge, on the other hand, is knowledge that is not easily available. Tacit knowledge is specialized knowledge that can only be acquired by people and firms working in close contact with each other. And since tacit knowledge is “spatially sticky” and is rooted in the social and institutional context from which it is derived, all of these factors combine to produce a high level of embeddedness of local firms that are linked together in a deep network of knowledge-sharing; these firms are also bound by institutions that facilitate the building of trust along with close social relations among all actors involved (Howells, 2002).

Moreover, a critical element of this discussion that is often overlooked is the relationship that exists between tacit knowledge, in general, and that of knowledge spillovers in particular. In a great deal of the literature that discusses this topic, it is assumed that the tacit knowledge which is being shared is knowledge that is highly technical in nature. This is simply not the case. There are many types of so-called knowledge spillovers, and technical knowledge is only one kind of specific knowledge
spillover that contributes to the formation of a successful cluster. Another very important source of knowledge spillover is the knowledge that is found in recent university graduates. This is the case because this type of knowledge flows from the research institute to the firm via the student who brings such knowledge into the firm. This type of knowledge spillover also moves between firms in the form of mobile labour. The academic literature on this topic strongly suggests that “the recombining of talent in new constellations through labour mobility and the spinning-off of new start-up firms is one of the most important sources of innovation in dynamic clusters” (Wolfe and Gertler, 2004; Brown and Duguid, 2000; Saxenian, 1994).

A third form of knowledge spillover concerns the use of entrepreneurial skills. Entrepreneurial skills are not discussed in a focused way in the scholarly literature, yet they are critical to the overall success of cluster policy. And one of the most important entrepreneurial skills that small and medium-sized firms need to possess is their ability to understand which external markets are the most suitable markets for expansion. This kind of information gets transmitted through the cluster from a variety of methods; however, one of the most important methods of transmission is through peer-to-peer mentoring which is organized by local civic associations. This just serves to further underscore the vital importance of regional institutional structures once again.

A final example of knowledge spillover that is critical for cluster success concerns the kind of infrastructural knowledge spillovers that are found in specialized accounting, financial and legal firms. These particular types of specialized services are very important to cluster success as they provide vital support to the individual firms within the cluster (Wolfe and Gertler, 2004:1077).
The key point to understand about these knowledge spillovers is that many of these interactions take place locally; therefore, a great deal of the knowledge that spills beyond a firm’s boundaries gets confined to a particular region. This benefits potential innovators who often locate in large urban centres so that they can take advantage of this access to knowledge (Orlando and Verba, 2005:35).

Over the long term, the combination of so-called thick labour markets and knowledge spillovers results in the concentration of a highly skilled labour force in large urban centres. According to the US Bureau of Labour Statistics, large urban centres, consisting of between 1 to 4 million people, have twice as many scientists and engineers per capita than do less populated urban centres consisting of less than 1 million people (Orlando and Verba, 2005:35). In the end, all of this research suggests that large urban centres that have thick markets and knowledge spillovers also have higher innovative activity. The evidence available corroborates this point: high-tech capital and high-tech workers are employed disproportionately in large urban centres (Orlando and Verba, 2005:37).

It is important to realize, however, that even though the hard evidence indicates that high-tech workers and high-tech capital are disproportionately employed in large urban centres, this does not mean that it was a naturally occurring development of cluster policy. All of the evidence from research to date indicates that it can take decades for a proper cluster to form. Even though this is the case, there are still critical elements that must come together when thinking about clusters as a form of policy, within innovation policy, if a cluster policy is to take shape and produce the desired results.
Key Actors in the Formation of a Cluster-Related Innovation Policy

Developing a cluster-related innovation policy is a complex process requiring multiple actors who can play their part so that successful clustering can be achieved over time. Every cluster development initiative has its own unique set of qualities, and most successful cluster policies are the result of trial and error before the policy can be judged a success. A successful cluster policy is not an end in itself; rather it is a means to an end of economic growth, innovation and competitiveness.

There are few places more important for understanding these developments than the City of Toronto. Each cluster that has been selected for the case studies possesses its own unique set of challenges, and that is why it is critical to develop an understanding of how these key actors interact with each other.

If a cluster-related innovation policy is to have a chance of being successful, four key actors must be present and must work together to co-ordinate their actions to achieve success. These four actors are: firms, government/policymakers, academia, and finance, or the financial sector. (Andersson et al, 2004:86).

Without a doubt, the firm plays a pivotal and central role in the formation of cluster policies. Some firms are reluctant to undertake this role since it involves the building-up of social networks as well as entering into collaborative relationships with other firms. Traditional neoclassical economic theory has always stressed the fact that firms interact with each other only through the mechanism of the price signal of the market, and thus only through competition. It is understandable that firms are reluctant to enter into collaborative relationships since they fear losing their competitive position, and thus their potential market share, to other firms.
However, given the complexity of the innovation process that now exists, firms have had to rethink their position on this matter. In point of fact, the rise in collaborations by firms is a direct reflection of this complex innovation process, particularly innovation that is undertaken by knowledge-based industries. In today’s climate, a firm does not possess the necessary resources—whether these resources are knowledge, skills or costly equipment—to be “self-sufficient in attaining their innovation goals” (Creutzberg, 2006:2).

Most successful clusters have one major firm that acts as an anchor firm. In the case of firms, an anchor firm can act as a magnet and draw other firms to locate close to it. It is possible for entire clusters to develop from the formation of one or two firms that spark the growth of multiple smaller firms. Even though the appearance of these anchor firms is difficult to predict, the fact remains that they are central to the development of any local cluster. For example, anchor firms played a central role in the founding of MCI and AOL, in Washington, D.C., (Porter, 1998; Porter, 2003), as well as in the founding of NovAtel in Calgary, Alberta (Langford, 2003). A research lab can also act as a technology anchor and effect the choice and location of firms who will want to partake of the social and institutional networks that will be afforded to it by its membership in the cluster.

Firms that undertake this role to support cluster development, by acting as magnets to attract other firms to locate in the same region, soon start to form social networks and engage in collaborative learning. Not only do these firms engage in cluster development, and innovation, they also help to develop an experienced group of managers and workers (Andersson et al, 2004:89). But even though firms play a pivotal role in the formation of clusters, they do not do this in isolation from other key players.
One of the other key players in this process is the role played by government, along with policymakers within the government, as they help design the conditions for an overall cluster policy. Governments have a strong role to play as a key actor in developing a cluster-related innovation policy for the City of Toronto. In this regard, there is already a lot to work with given the tendency for high-tech firms to want to locate in large urban centres. Governments can influence the developmental framework of cluster policies by ensuring that a clear formulation or rationale exists; they can also adopt a systematic approach to the problems identified and the solutions that are proposed (OECD, 1999:17). In specific terms, governments can influence the development of clusters in a number of different ways. One of the most important things that governments can do to aid in the development of clusters is to ensure that public structures which have been established, along with the rules-of-the-game, will not be changed by any act of political whim. Governments must also develop clear-cut objectives, and goals, as well as develop the appropriate bench marks to measure the success of their goals (Andersson et al, 2004:94; OECD, 1999:17).

But when it comes to the actual role of creating clusters, it is often asserted that governments should refrain and only partake in the development of already existing clusters. Over time, however, this reasoning has begun to be questioned. Indeed, the more recent thinking on this matter seems to suggest that there may be very valid reasons for governments to take a proactive role in cluster development, both to foster new clusters and to strengthen existing ones (Andersson et al, 2004:92; National Governors Association, 2007:3).
In this regard, the role of the national government is critical. For example, the success of the aerospace cluster near Toulouse, France, is almost directly attributable to the role of policies pursued by the French state; today, it continues to be supported by European level policies governing competition, regulation and aerospace programs in general (Department of Trade and Industry, 2004:51). The rationale for operationalizing these concepts in this fashion is clear: local governments are better able to assess which firms are ripe for cluster development while national governments have to be concerned about both the existing clusters and the new clusters that will develop in the future. National governments must also ensure that the fundamental infrastructure—as well as the “institutional and regulatory conditions required for new clusters to evolve”—are also in place (Andersson et al, 2004:92; OECD, 1999:18). Finally, the fact that the national government will be intimately involved in leveraging its financial resources with that of the City’s only further serves to indicate the prime importance of the national government in the cluster policy process.

However, even though there is no question that the national government has a critical role to play in fostering the development of clusters, it is important to understand that the local government realm also has a very important role to play here as well. If it can be said that the national government has a grand overview of cluster development, it can also be said that the local government is much more attuned to the mechanics of local clustering and innovation processes than is the national government. This is local government’s strength: local government possesses a much greater understanding of the local firms in its domain, and it is better able to assess which firms are ripe for cluster development at a particular time and which are not (Bordeleau et al, 1999). Local
government is also in a much better position to collect information on competitive sectors in the local environment. Therefore, when the national government is allocating resources to serve the needs of local government innovation, it will have to allocate these resources so that they foster the build-up of local skills.

As important as the role of government is in creating a good cluster policy, the role played by the academic community is also extremely critical. This critical element of cluster policy needs to be present if clusters are to form in urban centres. For the purpose of this literature review, academia is defined as universities, public labs and research institutes. Academia possesses certain characteristics that make it possible for it to take on a supporting role throughout the clustering process. Universities, along with other public sector institutes, possess in-depth knowledge, analytical competencies and specialized communication skills. These specialized skills allow academic actors to act as facilitators building up trust and social capital; it also allows them to play a role in assessing the cluster’s strategic direction, especially as it pertains to the areas of innovation and network creation (Andersson et al, 2004:97, Landry et al, 2000).

In the past, concerns have been raised that academia in a lot of countries “had weak incentives to engage in commercial undertakings” (Andersson et al, 2004:97). But current research dispels such notions. Within academia, universities have emerged as critical actors in the knowledge-based economy (OECD, 1999:4). Today, universities are expected to play a prominent role in promoting innovation and technological change (Bramwell and Wolfe, 2006:1). However, while the presence of a leading research university is a critically important asset for regional economic growth, it will not, by
itself, stimulate strong regional economic growth because “universities tend to be
catalysts of technological innovation rather than drivers” (Bramwell and Wolfe, 2006:1).

In Canada, as elsewhere, universities are expected to become much more
entrepreneurial entities and act as generators of commercializable knowledge (Doern and
Levesque, 2002; Doern and Kinder, 2007; Doern and Stoney, 2009:3). However, it can
also be argued that universities provide much more than this: they also provide critically
important mechanisms of knowledge transfer. Universities also help to generate and
attract talent, and this talent contributes to the pool of tacit knowledge that is so critical to
the development of innovation in the local economy. Moreover, this talent attraction by
universities contributes to the so-called “thickness” of the local labour market in large
urban centres, thus stimulating more innovative activity in the long term (Florida, 2002,

But the “thickness” of a local labour market will not help to stimulate the development
of more innovative activity for very long without a good deal of money being made
available. The last component of a cluster policy that needs to be present if clusters are to
form in large urban centres is the element of finance. Here a clear distinction needs to be
made between two very important, but very separate, funding sources. The distinction
that is crucial to establish is that of the role played by City financing versus that of the
role played by other financial actors in the cluster policy process.

And even though the cluster theoretical literature indicates that government and
industry are the principal sources of financing for cluster development, the fact of the
matter is that the evolving complexity and evolution of clusters necessitates the
involvement of other financial actors. There are a number of different kinds of financial
actors. Bankers, insurance companies, public pension funds, angel investors and venture capitalists are starting to play a more important role in the financing of cluster development. All of these entities have their preferred methods of operation. For example, institutional investors such as pension funds and banks conduct business using various intermediaries while directing some funds to venture capitalists.

While these financial actors do not want to be exposed to high risk, their “strong presence in local markets and well-developed networks make them important players in cluster initiatives” (Andersson et al, 2004:99; National Governors Association, 2007:22). This is important because possessing knowledge of key players in clusters helps to create trust among all the actors involved in cluster initiatives, thereby reducing the risk involved as well (Cote, 2001, Putnam, 1993).

Given their risk-averse nature most financial actors are not going to start a cluster; however, the skills and abilities they possess are of great benefit to the clustering process. Venture capitalists are very good at identifying clusters that are ripe for investment by the public sector, as well as engaging in the evaluation of cluster initiatives. Having access to venture capital is important because it can “reshape the way the public sector engages in handling risk” (Andersson et al, 2004:100; National Governors Association, 2007:4). The way this works is that a particular set of venture capitalists establishes a syndicate. This allows the public sector to “trade its responsibility for supporting high-risk technology against co-investments with venture capitalists and other private sources of funding” (Andersson et al, 2004:100)

LOCAL GOVERNMENT
The second complementary conceptual underpinning and related literature stream centres on local government. Since this dissertation focuses on local government, three sub-themes are examined. The first looks at core literature on local government and cities in Canada. The second sub-theme addresses the problem of financing a cluster-related innovation policy for the City. The third sub-theme examines the issue of leadership within the context of place-based policy making and its relationship to multi-level governance and how this impacts upon the City’s ability to develop its cluster-related innovation policy.

The focus of this discussion is not about the general principles and overall politics of local government per se; instead the focus of the discussion is on how local government uses its power and capacities to try and develop a cluster-related innovation policy, so that it can bring about innovation, economic development and growth for the city and its citizens.

**Local Government, Cities and Urban Government**

The study of local government in Canada has in many ways operated in the backwaters of Canadian political analysis. In Canada, as Sancton observed in the early 1980s, it has neither been “informed by the general literature on Canadian politics nor added to it” (Sancton, 1983:310). Since then, as we see below, there has been some improvement in this state of affairs, but it remains the case that finding out anything about city politics in Canada is not an easy or straightforward matter. This same state of affairs applies even more to the area of local government that deals with the relationship of local government to cluster-related innovation policy.
Local government can refer to small villages and towns, but increasingly when we talk about the concept of local government, we can also talk about cities per se and even add the term the “local state” and urban areas. But in fact the very definition of what constitutes a local state, as well as what we really mean by the term urban area, are very often left open to question. Many of the theories simply do not address these questions, or else they equate local governance with municipalities by making the geographic boundary of the municipality equivalent to the geographic boundary of the so-called urban area (Graham et al, 1998:35).

Another approach that is both more effective and rigorous is to focus on the concept of urban governance, which is defined as “the collective capacity to set and achieve public policy goals” in urban areas (Graham et al, 1998:35). This model of urban governance consists of three parts: municipal (and regional) governments, special purpose bodies, and the voluntary sector.

The most familiar part of this tripartite model of urban governance is the municipal government. It is composed of a mayor and a city council that “presides over an administrative structure with responsibilities for a range of local functions” (Graham et al, 1998:36). In many cases, however, city-regions are governed by more than just a single municipality; very often there is also a second tier of regional government that is involved in the governance process, and they have their own council and administration.

The second component of this model of governance involves local special purpose bodies. Local special purpose bodies are the agencies, boards and commissions that are charged with the responsibility of a specific function at the local level. Most of these
special purpose bodies have a degree of autonomy from, and an arm’s length relationship with, the municipal councils.

Finally, the third and final component of this urban governance model involves the voluntary sector. Today cities are under enormous pressure to deliver services in as efficient a manner as possible given the fiscal constraints they face. Faced with the reality of this situation, local governments are now turning many programs that once were provided by the city government over to voluntary organizations. The range of services that are now provided by these voluntary organizations is enormous: they can range from running food banks to maintaining parks. And the responsibility for delivering these services places these organizations in a new relationship with municipal governments. It is a relationship of co-production. This co-production is usually based on the transfer of money, since the local state tries to cut costs by giving core funding to local voluntary organizations.

However, since the focus of this discussion is on how local government uses its power to try and develop a cluster-related innovation policy, we shall primarily be concerned with how the Mayor, City Council and the bureaucracy deal with this situation. But if an innovation policy is to be developed and carried out by the City, and if networks of firms are to come together, the City must have the financial resources to bring forward its innovation and cluster strategy.

**Local Government Finances**

An examination of broader overall patterns in municipal finance over recent decades indicates that municipal spending has been increasing at a steady rate; however, the financial revenue-raising tools available to municipal governments have not changed. For
example, during the period of 1988 to 2004, per capita expenditures in constant dollars increased at an annual rate of 0.9 per cent. Overall, total municipal expenditures in Canada, in 2004, were over $55 billion, or $1,735 per capita on average throughout the entire country. In specific terms, expenditures per capita for individual provinces within Canada ranged from $483 in Prince Edward Island to over $2,100 in the province of Ontario. The reason why expenditures in Ontario were higher can be attributed to the fact that a significant portion of social services and social housing costs are now paid for at the local level, or municipal level, in this province (Slack, 2006:3).

One of the biggest problems facing municipalities is the fact that they only possess one primary revenue-raising source. Table 1.1 compares the distribution of municipal revenues for the years 1988 and 2004.
Table 1.1 Distribution of Municipal Revenue Sources, Canada: 1988 and 2004

<table>
<thead>
<tr>
<th>Revenues</th>
<th>1988</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Taxes</td>
<td>48.6</td>
<td>53.3</td>
</tr>
<tr>
<td>Other Taxes</td>
<td>1.4</td>
<td>1.5</td>
</tr>
<tr>
<td>User Fees</td>
<td>20.0</td>
<td>23.4</td>
</tr>
<tr>
<td>Investment Income</td>
<td>6.0</td>
<td>4.5</td>
</tr>
<tr>
<td>Other</td>
<td>1.1</td>
<td>1.5</td>
</tr>
<tr>
<td>Total Own Source Revenue</td>
<td>77.1</td>
<td>84.1</td>
</tr>
<tr>
<td>Unconditional Grants</td>
<td>5.8</td>
<td>3.0</td>
</tr>
<tr>
<td>Conditional Grants</td>
<td>17.1</td>
<td>12.9</td>
</tr>
<tr>
<td>Federal</td>
<td>0.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Provincial</td>
<td>16.4</td>
<td>11.7</td>
</tr>
<tr>
<td>Total Grants</td>
<td>22.9</td>
<td>15.9</td>
</tr>
<tr>
<td>TOTAL REVENUE</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>


These data make it clear that property taxes are the major source of revenue for municipalities. As a percentage of total revenues, property taxes have increased somewhat over the years. Another increase that is discernable is the increase in user fees that has also taken place. It can also be seen that grants (which come mainly from provincial governments) have decreased significantly. Overall, Table 1.1 shows that the primary source categories of revenue have remained almost the same (Slack, 2006).
The central reality is that local governments in Canada rely very much on the property tax as their main source of revenue (Courchene, 2005). Some municipalities, however, allow their local government’s to levy certain sales taxes, such as taxes on hotel/motel occupancy. But these types of taxes only result in the collection of a small amount of revenue. This is why critics argue that the property tax is not sufficient to pay for all the responsibilities that local government’s are now required to assume. In economic terms, the property tax is said to be an “inelastic” tax, meaning that it does not grow with the economy.

In contrast, the European Charter of Local Self-Government (Article 9, Paragraph 4) clearly states that “the financial systems on which resources are available to local authorities shall be of a sufficiently diversified and buoyant nature to enable them to keep pace … with the real evolution of the cost of carrying out their tasks” (Slack, 2005:6). This is also why critics argue that local government needs access to the income and sales taxes that do grow with the economy. Taxes that do not grow with inflation can create problems for local government officials who do not have the financial resources necessary to meet their local government obligations.

Cluster-related innovation policy, it can be argued, is an area that falls under this category. Moreover, some local government observers doubt that municipal governments will be able to continue to raise revenue from the property tax in the future given the continued demise of the manufacturing base and the rapid rise of the service sector in the Canadian economy (Slack, 2005:6).

Meanwhile, there are other fiscal challenges facing municipalities today that are equally important. The so-called “downloading” of services by both the federal and
provincial governments has caused the cities many problems. Increased pressure has been placed upon municipalities to finance these new obligations. Unfortunately, since the revenue base was not there, this has meant that cuts had to be made to other projects, such as innovation, in order to meet the new financial obligations of the City.

**City Leadership in the Context of Place-Based Policy**

Leadership theory literature overall is a vast field embracing efforts to characterize the nature of leadership in diverse political, institutional and organizational settings and in different situational circumstances such as crises, periods of financial and policy stability and periods of change (Jones, 2007; Selznick, 1984; Wildavsky, 2004; Schneider and Teske, 1992). Leadership can accordingly be diverse contexts in which it may consist of overt power by individuals or institutions over others, or softer patterns of influence, guidance and learning based on expertise and knowledge. The discussion below of place-based literature is also relevant to explicit leadership theory, styles and contexts. Some of these diverse characteristics do emerge in the two cluster case studies and in the use of the leadership variable in the analytical framework discussed further in Chapter 2.

Since the focus of this dissertation is on cluster-related innovation policy development an important segment of the local government literature stream centres on city leadership in particular, especially the relative roles of the mayor, city council and city bureaucracy.

Some authors conceptually see the mayor as the pivotal player on most policy decisions (Graham et al, 1998). Here it is the mayor, and the coalition building potential of the office itself, that tilts the balance of power for leadership in the mayor’s favour. Given the fact that there are no proper functioning political parties at the local government level in the province of Ontario, the mayor is forced to use his powers of
persuasion to create coalitions on city council; it is only through these coalitions that the mayor is able to achieve any of his, or her, policy objectives.

Research conducted in the United States suggests that economic development policy-making is largely influenced by bureaucratic and professional actors (Reese, 1997). When economic development directors were surveyed, 47 per cent thought they were the most influential in starting economic development initiatives. This was the case because economic development directors thought that economic development projects were primarily guided by the professional training of economic development decision-makers. Four per cent of the people surveyed thought that the Mayor was the most influential person involved in this process; however, only eleven per cent of the people surveyed thought that the City Manager, or the Chief Administrative Officer, possessed sufficient power to initiate economic development projects (Reese, 1997:84-89).

On the other hand, the small amount of research that has been conducted in Canada seems to indicate, once again, that scholars are divided on this issue. Certain scholars see the bureaucrats—particularly the City Manager, or Chief Administrative Officer—as playing a leading role in exercising leadership on important policy files (Plunkett, 1992).

A growing body of recent scholarship dealing with urban and community research has focused on the argument that “place matters” to political life and policy-making (Dreier, Mollenkopf, and Swanstrom, 2001; Bradford, 2002). Today, places are no longer viewed as they once were, as simply locations on a map, now they have been re-conceptualized as “dynamic locales” that have “their own diversity and power relations” (Reddel, 2002).

These dynamic locales impact key aspects of citizen well-being over a whole number of policy fields ranging from economic development and innovation, to citizenship rights.
and environmental sustainability. But in the case of economic development, it is not only the collection of assets in a place that matter; the social networks and personal interactions that fuel the learning and innovation processes are also just as important.

The important point to understand about the above policy examples is that the local place becomes “the focal point for public policy innovations.” This is the case because place-based policy targets specific communities so that they can respond to location-specific challenges, thereby developing better government policy over the long-term (Bradford, 2005:8).

However, this approach to developing policy is not without its share of risks. In order to counterbalance the potential risks that accompany this place focus approach to developing policy, one needs to make sure that the upper levels of government continue to perform their roles as well. A real delicate balance has to be achieved here otherwise a place-based approach to policy-making can have a “variety of unintended consequences” (Seguin and Divay, 2002).

Recent research has already begun to characterize and adumbrate these problems. First, policy coordination may become a much more difficult thing to achieve; as government interventions proliferate they may also become too fragmented (Perri et al, 2002). Second, so-called local “growth machines” may try and promote their place by competing for much needed investment in ways that actually undermine inter-territorial equity (Dreier, Mollenkopf, and Swanstrom, 2001).

In order to avoid such problems, one has to make sure that spatially-targeted policy approaches are “linked to and informed by wider “aspatial”…universal policies” that encompass such things as health, employment, and innovation (Bradford, 2005:9).
Bradford (2005) also argues that given the increasing importance of local knowledge for positive policy outcomes, these standard policies need to be informed by a so-called “urban lens” which would assess the spatial impact of these policies, as well as taking into consideration the capacity of the local community to design and deliver policy outcomes.

Yet this need for local knowledge invariably exposes weaknesses in already established governing frameworks. For example, top-down, one size-fits-all policy delivery is not an appropriate method for bringing about place-sensitive solutions to complex policy problems. Moreover, the bureaucracies of the state can no longer claim to be the sole source of policy knowledge development as they continue to encounter severe challenges to imposing their will on other policy players. Therefore in order to meet these new policy challenges, new relations will have to be developed among the state, civil society and the economy, along with the different branches and levels of government.

As Bradford argues, the best way to achieve these new policy outcomes is by keeping the structure and idea of place sensitive policies intact by using the process of collaborative, or multi-level governance, to achieve these desired local government objectives. Indeed, the broad policy literature that continues to emerge on this subject suggests that the key to policy success will be found in developing governance relations (Pierre and Peters, 2000).

The advocates for the place-based governance position base their claims on three separate but interconnected arguments that have their basis in cultural, institutional and political settings (Amin and Thrift, 1995, Bradford, 2003). The cultural argument maintains that spatial proximity makes it easier to achieve repeated face-to-face
interaction, and repeated face-to-face interactions result in better communication and more open information sharing. Over time, the goal that is hoped for is that a greater understanding and trust will emerge among the participants resulting in better policy outcomes.

The institutional argument is based upon research which indicates that localities are very often places where civic associations flourish, come together and “join up.” The end result of these actions is that an “institutional thickness” develops which creates multi-sectoral coalitions around certain specific projects.

Finally, the political argument is rooted in the very important need of having strong local leadership so that multi-level governance can work. It is critical to have local leadership so that local assets can be leveraged and the community can be mobilized. Local leaders must also be familiar with local conditions, and they must be able to act as strategic brokers who can go between different networks and bring diverse interests together. However, in order for this to be successful, the local collaborations have to “scale up” to the extra-local jurisdictions where critical decisions are made about policies and resources (Bradford, 2005:11).

However, this multi-level governance approach to policy making also comes with its own share of risks. Because multi-level governance depends far more upon policy actors and organizations working together who are not familiar with each other than it does in engaging in hierarchical commands, finding ways to work together and share in the burden of joint responsibility is of paramount importance to overall policy success. Moreover, managing the transaction costs of multi-level governance collaboration will also require new and better styles of leadership as well.
Cameron and Simeon (2002) are another pair of scholars who are also arguing for new and better forms of governance. In their paper which examines the changes that have taken place with regard to intergovernmental relations in Canada, the authors contend that collaborative federalism also “needs to be set in the larger context of multi-level governance in Canada.” They maintain that it will become increasingly necessary “to look to the role of local…government and their interface with provincial, national and international institutions” (Cameron and Simeon, 2002:69).

Yet achieving this desired objective will not be easy. Most governments adopt a pragmatic approach to any form of collaboration. The federal and provincial governments will continue to protect their own turf and exploit every chance to take credit for any successful initiatives, while at the same time, assigning blame to other policy players for any perceived failures.

Equally important, there are also certain potential costs involved with the collaborative model. For example, the so-called “joint-decision trap” can emerge when autonomous actors who are committed to consensus decision-making try to actually make decisions. In addition, the time and cost of coordination can escalate, and important decisions may actually be reduced to their lowest common denominator (Cameron and Simeon, 2002:65-66).

That said, there are still reasons to be optimistic. One principal reason to remain so is based on the fact that Canadians constantly rate cooperation among their governments as an important and desired objective (Cameron and Simeon, 2002:68).

Nowhere is the manifestation of this desired objective more important than when the City tries to develop its own cluster-related innovation policy. After all, as Bradford has
argued the best way to achieve these new policy outcomes is by keeping the structure and idea of place sensitive policies intact by using the process of collaborative, or multi-level governance, to achieve these desired local government objectives. At its core, the City’s cluster-related innovation policy is a place sensitive policy that is rooted in local government territory. Thus it makes sense to utilize the multi-level governance approach to achieve the City’s desired objectives, given the fact that the City lacks both the jurisdictional authority and the financial resources to do so alone.

Local leadership is also an important ingredient to achieving any kind of policy success, and as the case studies unfold it will be interesting to see how much local leadership exists and where it is located within the City.

MULTI-LEVEL GOVERNANCE

Multi-level governance is the third and final stream of literature drawn on in the analysis. The review below looks at it in the context of its birth as a theoretical concept in the origins and evolution of the European Union, in relation to Canadian federalism, in relation to an overall multi-level governance debate, and finally in relation to some links with innovation policy overall and cluster-based innovation policy as well.

The Origins of Multi-level Governance in the European Union

Gary Marks (1992) was the first person to employ the phrase multi-level governance. He used this phrase to illustrate the changes that had taken place in the European Union’s structural policy after its major reforms had taken place in 1988 (Bache and Flinders, 2004:2). At that time, the European Commission, along with its allies in the European Parliament, desired to bring Greece, Portugal and Spain into the European Union (EU). Given the fact that these countries were poor, the governments of the richer nations of the
EU agreed to a side-payment to poorer member states in order to offset the anticipated consequences of the internal market programme. As a result of these actions, the structural funds were doubled so that disadvantaged regions could be helped (McKay, 1999, Burgess, 2000).

To ensure the effective use of these funds, these governments accepted the Commission’s directive that funds be administered through partnerships established within the member states, “consisting of representatives of national, regional (and/or local) and supranational actors, including the Commission” (Bache and Flinders, 2004:3, Hix, 1998, Sangiovanni-Eilstrup, 2006). While he was studying these developments in structural policy, along with the partnership principle in particular, Gary Marks started to develop the concept of multi-level governance.

Marks defined multi-level governance as “a system of continuous negotiation among nested governments at several territorial tiers” (Bache and Flinders, 2004:3; Marks, 1992, 1993). It is important to note that the multi-level governance concept contains both vertical and horizontal dimensions. The term ‘multi-level’ refers to the increased interdependence of governments which are operating at different territorial levels; while the term ‘governance’ refers to the growing interdependence between governments and non-governmental actors at various territorial levels (Bache and Flinders, 2004:3).

Marks also argued that so-called sub-national actors were becoming increasingly influential in decision-making, a point that will be important for us to keep in mind when we come to look at innovation and cluster policy in Canada. Marks developed this insight after looking at the literature that dealt with the policy network approach to policy development. In Britain, this approach was largely developed by Rhodes (1988).
According to Rhodes, states were fragmenting and non-state actors were assuming a much greater role in the decision-making process for policy development (Bache and Flinders, 2004:3).

Moreover, multi-level governance does not just refer to negotiated relationships between institutions; it can also refer to a “vertical layering” of governance processes at different levels (Pierre and Stoker, 2000). This means that institutional relationships can take place directly between the transnational level and the regional level, thus effectively bypassing the state level altogether (Kohler-Koch, 1996; Marks et al, 1996; Scharpf, 1997; Puchala, 1999, Smith, 1997).

**Different visions of Multi-level Governance**

Liesbet Hooghe and Gary Marks believe that the scholarly literature which is currently available on the subject of multi-level governance clearly distinguishes between two different visions of this concept. They have labeled these different visions Type I and Type II multi-level governance (Bache and Flinders, 2004:17). For the purposes of this analysis, Type I multi-level governance will only be considered because of its relationship to federalism.

Hooghe and Marks indicate that the intellectual foundation for Type I multi-level governance is federalism. This is the case because federalism is concerned with power sharing among various levels of government in federalist systems that significantly predate the European Union. Moreover, Type I multi-level governance is concerned with jurisdictions that are non-intersecting. Here membership is usually territorial: the jurisdiction is usually the national state, local, and regional level. A final distinguishing
feature of this kind of federalism is that membership in the highest jurisdiction does not intersect with membership in the lowest jurisdiction (Bache and Flinders, 2004:17-18).

Clearly, all of these factors indicate that some obvious overlaps exist between Type I multi-level governance and Canadian federalism. These overlaps also have important implications for innovation policy at the city-region level. However, in order to fully appreciate and understand just how Type I multi-level governance is similar to federalism in Canada, we need to briefly discuss the nature of federalism in Canada.

**The Nature of Federalism In Canada**

Scholars of federalism have traditionally defined the concept in terms of constitutional law; as such federalism is a system of government in which powers are divided between two levels of government. In the case of Canada, this has meant that power has been divided between the federal and provincial governments (Hueglin, 1988:3). Separate spheres of jurisdictional competence are supposed to prevent the abuse of political power, and also ensure the autonomy of the ten provinces (Vipond, 1991, Whitaker, 1992).

The reality of this situation, however, is quite different: given the complexity of modern politico-economic relationships in Canada; the jurisdictional divides that exist between the federal and provincial governments can never be clearly and completely separated. In point of fact, the relationship that does exist between these two levels of government can involve both cooperation and/or competition (Hueglin, 1988:19). Over the years, scholars have suggested that federalism in Canada has grown and evolved into two different but also closely related forms: executive federalism and the so-called New Centralism which favoured the rise of the federal spending power and incursions through that power into realms of provincial jurisdiction.
The term “executive federalism” was first employed by the Canadian political scientist, Donald Smiley, in the 1970s, to characterize the nature of the intergovernmental relationship in Canada. Smiley defined executive federalism as “the relations between elected and appointed officials of the two levels of government” (Smiley, 1976:54). Over time the term has come to be linked with other terms: for example, executive federalism has taken the form of multilateral federalism, meaning that the federal government and all ten provincial governments were involved in negotiations; at other times, executive federalism has taken the form of bilateral federalism, meaning that the federal government was in negotiations with only one other province or possibly a small sub-set of provinces (Russell, 1993).

From the time of Canadian Confederation, in 1867, to the commencement of the Second World War, in 1939, both the federal and provincial governments operated in a state of classically defined federalism, each with their own realms of legislative competence. However, from the time the Second World War ended, in 1945, to the middle of the 1960s, changes in federalism began to take shape. During this time classical federalism ended, and a much more formalized structure for intergovernmental relations between the two levels of government began to develop (Cairns, 1991, Brock, 1995, Brooks, 1997).

After the end of the Second World War, the Liberal Party of Canada created a new vision for the country. Even though most of what the Liberal Party was proposing to do actually resided within the jurisdictional confines of the provinces, the federal government was actually able to enlarge its role through the mechanism of the federal spending power. As Smiley observed, “in the postwar years, the use of the federal
spending power more than any other procedure altered the federal balance in favor of Ottawa” (Smiley, 1966:41). In time, this new liberal vision came to be known as the New Centralism. This use of the federal spending power will figure prominently in the discussion of multi-level governance, only this time it will be more multi-level with Ottawa spending money directly into the cities, and in some realms by skirting the provinces and dealing directly with their constitutional creatures: city and local government.

The Key Multi-Level Governance Debate

The key debate within multi-level governance circles can be summarized in the following manner: Is governance still to be understood as a central state monopoly, as has been the case since the Treaty of Westphalia in 1648, or is governance to be understood, today, as being organized through multiple jurisdictions that sees the dispersion of central government authority directed into both vertical and horizontal directions?

If the dispersion of this central government authority is vertical, then this authority goes to actors who are located at other territorial levels; if the dispersion of this central government authority is horizontal, then it goes as well to non-state actors. The need for this new concept came about as scholars began to reflect upon the new experiment in multi-level governance that was taking place within the European Union. However, it also had immediate resonance in federations such as Canada which had always in a de facto way experienced multi-level governance. Scholars in EU and non-EU contexts were thus concerned about the broader implications multi-level governance would have on the nation state in this new post-Westphalian world.
This debate concerning multi-level governance is an important debate for us to consider today precisely because it raises very important questions about the continuing relevance, and importance, of nation states as well as central governments. It also focuses our attention on the other levels of government, other social actors, including the increasingly important non-state actors, as well as the way in which other agencies, apart from the central government, discharge the functions and the duties of governments.

For the first half of the twentieth century it seemed that strong political forces favoured the locus of power and authority as being contained within the nation state; since the 1970s, however, it appears that these strong political forces have reversed themselves, and this reversal has implications for the role of the nation state. Some scholars have predicted the nation state’s virtual demise, while other scholars have only talked about the ‘hollowing out’ of the nation state as an entity. In either case, the manner in which societies are steered, decisions taken and policy outcomes achieved becomes the main focus of attention for scholars who care about such matters (Bache and Flinders, 2004).

**The Implications Of Multi-Level Governance For Cluster-Related Innovation Policy**

A key question that comes out of the debate on multi-level governance is the following: What does this debate imply for multi-level governance in cluster-related innovation policy? In other words, if the dispersion of this central government authority is vertical, or horizontal, what effect does this have on the other actors at other territorial levels?

Perhaps if we return to the original definition of Marks, and look at this definition in a slightly different way, we can begin to discover an answer to this question. As has been
previously stated, Marks defined multi-level governance as “a system of continuous negotiation among nested governments at several territorial tiers” (Bache and Flinders, 2004:3; Marks, 1992, 1993). But multi-level governance can also be viewed in a more aggressive manner as consisting of an array of interacting and colliding institutions across levels of government which develop and administer policies and programs by making use of the usual policy instruments of taxation, spending, regulation and persuasion (Doern and Johnson, 2006).

There is no better illustration of how the concept of multi-level governance has indirectly benefited the municipal level of government, in the City of Toronto, than to trace the historical development of the federal government’s role in innovation policy through the use of its federal spending power.

*The Federal Spending Power and Program Initiatives*

During the latter part of the twentieth century, the federal government’s desire to expand its area of jurisdiction can clearly be seen in how it has dealt with the issue of innovation and research in Canada. Even though education is supposed to be under provincial jurisdiction, the fact of the matter is that the federal government has been directly involved in supporting research in Canadian universities since the beginning of World War One. The federal role in dealing with research institutions goes back to 1916 when it was given the mandate to fund research. With the establishment of the National Research Council (NRC), in 1916, the federal government made yet another contact with Canadian universities.

However, this federal contact with the NRC was not the first federal contact with universities. Prior to this relationship, there had been lots of contact through federal
agricultural research stations, as well as through mineral and mining research (Doern and Levesque, 2002). The NRC was initially created to promote industrial research, but it was not long before it was supporting university-based research and training graduate students (Cameron, 2004:2).

This legacy of involvement by the federal government in research and education increased after the end of World War Two, and has continued to gain momentum over the last fifty years. During the 1960s and 1970s, the ability to fund university research was in the hands of the federal government’s three granting councils that consisted of the Social Science and Humanities Research Council, the Medical Research Council and the Natural Science and Engineering Research Council. When the provincial government of Ontario established the Premier’s Council, in 1986, to fund support for research and technology, Ottawa began to take an even more serious interest in research. It should be noted, however, that the establishment of the Premier’s Council was not the primary factor that led Ottawa to start taking a much more active interest in research; there were a multiplicity of factors that led Ottawa to take this position (Doern and Levesque, 2002).

The Prime Minister of the day, Brian Mulroney, the leader of the Progressive Conservative Party, understood that research had serious implications for economic development and productivity in Canada. To counteract perceived deficiencies in this federal policy field, the Mulroney government initiated several new policy proposals (Cameron, 2004:7).

However, the development of new policy proposals was not the only concern occupying the Prime Minister’s attention. Economists in Canada were urging the federal government to balance the budget and rid the nation of the massive deficit that was
growing with each passing year. Mulroney tried to deal with this problem but was unsuccessful. Real change would not take place until the election of another federal Liberal government.

Under the stewardship of the Liberal finance minister, Paul Martin, things began to change. When Mr. Martin tabled his now famous 1995 budget in the House of Commons, the federal government began to put its fiscal house in order by cutting deep into provincial transfer payments; in total, some $6 billion in transfers payments were taken away from the provinces (Cameron, 2004:7). Under Martin’s tenure as Minister of Finance, the federal granting councils and federal S&T labs, and agencies, were hit hard with budget cuts that were close to 40 per cent (Doern and Stoney; 2009; Swimmer, 1996; Canada, 2003; Schillo, 2003). Within three years, however, the federal government had balanced the budget and was in a position to spend money on its research agenda. Since then, the federal government has put more than $13 billion into innovation and S&T funding (Doern and Stoney, 2009).

The first federal spending program initiative to come out of Ottawa during this era of federal fiscal surpluses was the Canada Foundation for Innovation (CFI). This program, introduced in 1997 and delivered through an arms-length foundation, was designed to give support to research infrastructure, including major equipment and installations in all universities, hospitals and colleges in Canada (Lopreite and Murphy, 2009). The initial endowment for this program was pegged at $800 million, but it was subsequently increased to $3.65 billion as the years progressed.

The federal government has designed this program so that the money is leveraged; the foundation provides only 40 per cent of the funding, and the rest of the funding comes
from either the provincial agencies or the corporate sector. Since this money is leveraged, the actual amount available for infrastructure spending is well over $9 billion (Cameron, 2004:9). This program benefits the cities in general since most of Canada’s hospitals, universities and colleges are located in cities.

In 1997, the Liberal budget also made permanent the Networks of Centres of Excellence program by promising annual funding amounting to $47.4 million. (Wolfe, 2002:10). Once again, this is an important program for the development of innovation in Canada, and by extension the cities, because this program had the federal government transfer money directly to networks of national and regional researchers (Atkinson-Grosjean, 2006).

In 1999, another federal initiative that had major implications for the development of research and innovation in Canada was announced. With the creation of the Canada Research Chairs (CRCs) the federal government allocated $900 million, over five years, for the expressed purpose of hiring 2,000 professors. These research chairs were divided into two categories: senior level chairs, known as Tier 1 Chairs, were funded at a total cost of $200,000 annually; junior level chairs, known as Tier 2 Chairs, were funded at a cost of $100,000 annually. This program was created for two important reasons: first, the CRCs were created to offset the critical shortage of professors that were anticipated due to retirements; second, the CRCs were created to stem the tide of Canadian professors accepting job offers to prestigious American universities (Cameron, 2004:11-13). This has important implications for innovation in Canada. Universities act as magnets for talent attraction and retention. By creating these research chairs, not only would Canada keep its promising researchers at home, but it would also encourage more graduate
students to stay in Canada and work with these top-notch researchers. In many cases, once these graduate students are finished their training, they will bring their tacit knowledge and skills into Canadian firms and other knowledge intensive organizations. If other conditions are also present, this will greatly increase the chances that further innovation will occur.

A final example illustrates the extent to which the federal government is committed to promoting the effectiveness of research in Canada. In 2001, the federal government began to pay the indirect costs associated with research. In agreeing to fund the indirect costs associated with research, the federal government finally addressed a major financial problem pertaining to research itself. Ever since the federal government originally became involved in research, it has only covered the direct costs of research. This meant that universities, or provincial governments, had to pay for the indirect costs of research, i.e. heat, light, administrative expenses and salaries. In the end, this meant that universities were actually penalized for their success in getting sponsored research grants. The original funding for these indirect costs was set at $200 million for 2001-02. The new budget tabled in 2003 increased this amount to $225 million, and this amount will be given to the universities on an annual basis (Cameron, 2004:13).

**Direct Dealings With Cities and Municipalities**

While all of the above examples of federal spending on research indirectly benefit local government, and cities, another area where the impact of the federal spending power was felt was in the increase of the federal government’s direct dealings with cities and municipalities. The Infrastructure Canada Programme, The Winnipeg Development
Agreement, and The Vancouver Agreement are all indicative of how the concept of multi-level governance has grown and evolved in Canada (OECD, 2002:136; 161).

It has already been stated in the introduction that cities are creatures of the provinces, and it is the provinces that determine what other legislative and fiscal powers cities can exercise. Given the fact that cities have to rely on the property tax as their principal source of revenue, it is not surprising to realize that cities have limited financial resources to embark upon major infrastructure spending. Yet spending on infrastructure is urgently needed as it has a direct impact upon any innovation policy that a city might design. Put simply, infrastructure is critical to a city’s competitiveness and economic success.

In order to overcome this competitive disadvantage, the Federation of Canadian Municipalities (FCM) called upon the federal government to become more involved with the issue of urban infrastructure (FCM, 2002). As a result, in 2002 the federal government initiated a new national programme for municipal infrastructure called the Infrastructure Canada Programme. The total funding for this tripartite agreement is $6 billion. The federal government is committing $2.65 billion, over six years, and the remainder of the money will come from the provincial, municipal and territorial governments and also the private sector. Moreover, $2.05 billion of the federal funding will be directly invested in municipal infrastructure, while $600 million is earmarked for provincial highways (OECD, 2002:136). The first priority of this programme was the so-called Green Municipal Infrastructure, which includes water and wastewater systems, water management, solid waste management and recycling (OECD, 2002: 136).

The Winnipeg Development Agreement (WDA) is an example of how the federal government is involved in the long-term economic development of Canada’s cities. This
agreement is a five-year tripartite commitment on the part of all these levels of
government; the total budget for this endeavour is $75 million. The federal contribution
to this programme is in the order of $25 million. The main objective of this agreement is
to work with the local community and business to support the long-term economic
development of the City of Winnipeg. The City of Winnipeg has contributed one-third of
the total investment outlined above, and is responsible for the implementation of seven
programmes in the following areas: community development and security, labour force
development and strategic and sectoral investments (OECD, 2002:161). These
programmes are funded and delivered by each level of government only after they have
been developed in co-operation with the other two levels of government and have been
given the seal of approval by the Policy Committee of Ministers and the mayors (OECD,
2002:161). Clearly, there is a great deal of policy space being shared through this
agreement, and the City has a lot of input into how the policy gets developed for the
economic development of the City of Winnipeg. Once this agreement expires, plans are
already in the works to negotiate a successor agreement.

Finally, The Vancouver Agreement is another five-year commitment on the part of the
federal government, provincial government and the City of Vancouver to work together
to support economic, social and community development in Vancouver. Even though the
Vancouver Agreement is not funded, it does make use of existing mandates and
programmes to fund its initiatives. All parties to the agreement use funding that is
currently available from existing federal, provincial and municipal programmes to
finance particular projects. The Vancouver Agreement seeks to build a healthy and
successful community by offering training programmes to its inhabitants, increasing
support for employment, as well as offering programmes that ease the transition from welfare to work. Once this Agreement expires, a successor agreement is expected to be negotiated (OECD, 2002:141-142;162).

All of the above examples are important because they clearly indicate why a consideration and understanding of the concept of multi-level governance, as it has been applied and developed within the European context, and in Canadian policy realms as well, is relevant to this study of innovation policy at the municipal level in Canada. In some of these cases, the federal government has bypassed the provinces altogether and has dealt directly with the cities. In others, it funds networks and particular types of research need which also feed potentially into clusters by intent or in effect.

**Multi-level Governance and Its Effect on Innovation Policy in Cities and Municipalities**

We started the above section by asking what effect would the dispersion of a central government authority that is either vertical or horizontal have on the other actors at other territorial levels? A final consideration that needs to be addressed is how ultimately this affects the policy and funding leverage issues for the interacting federal, provincial and City programs that create these innovation-related cluster policies.

Within the Canadian context, there are a number of reasons why the concept of multi-level governance is important for understanding how innovation policy gets formulated at the municipal level. This concept can be used to illustrate just how centralization, and the use of the federal spending power, is used to transfer money directly to the lower levels of government. Through all of this, the notion of executive federalism also looms large; however, even though executive federalism predominates, there has also been a fair bit of bi-lateral federalism being practiced, as the provinces negotiate with Ottawa over the
different situations they face with their respective programs in innovation policy per se or in realms that interact with innovation in a tangential or indirect way.

Overall, however, executive federalism is the more potent concept. Given the lack of resources at the municipal level, cities and municipalities have no choice but to try and find ways of leveraging existing federal and provincial spending. Once this is accomplished, municipalities then need to direct this spending toward their own policy goals, which in this case involves the development of a cluster policy and strategies, as well as other innovation related initiatives. These programs do not just encompass funding for university research and infrastructure.

As has been previously stated in the introduction, the concept of multi-level governance has important implications for the City of Toronto’s innovation policy. This is the case because in the era of the knowledge-based economy, it seems likely that the economic importance of cities will keep growing. As Orlando and Verba (2005) have shown, it is the populous regions that are the most conducive to innovative activity; they offer more developed markets for the specialized inputs used in innovation (The Conference Board of Canada, 2006:3). Moreover, other scholarly research strongly suggests that in the 21st century’s knowledge-based economy, cities and city-regions are increasingly recognized world-wide as “drivers of national and international prosperity” (The Conference Board of Canada, 2007:1). All of this evidence only serves to indicate that, without the resources multi-level governance can offer, cities would be hard pressed to develop an innovation policy that will provide increased economic prosperity (Wolfe and Creutzberg, 2003).
Further evidence for this position was also provided by the number of different ways in which the federal government deals directly with provincial agencies, thus creating the need to employ the concept of multi-level governance in order to understand how these relationships work. The Urban Development Agreements that have been negotiated to help the cities are the most important example. Of the three urban agreements outlined before, the first two agreements clearly illustrate the importance of multi-level governance for the economic success of the city.

In the dissertation’s Introduction, we alluded to the fact that cities are creatures of the provinces, and it is the provinces that determine what other legislative and fiscal powers cities can exercise. Given the fact that cities have to rely on the property tax as their principal source of revenue, it is not surprising to find that cities have limited financial resources to embark upon major infrastructure spending. Yet spending on infrastructure is urgently needed as it has a direct impact upon any innovation policy that the City of Toronto might wish to design. Put simply, infrastructure is critical to the City of Toronto’s competitiveness and success. This is where the Infrastructure Canada Programme, and its relationship to multi-level governance, becomes so important to the City of Toronto.

Here the analogy with the EU Type I multi-level governance concept is also critical. Just as the sub-national government in the European Union was able to circumvent the state government and deal directly with the European Commission, in its dealings with the structural funds, so too has the Government of Canada been able to circumvent the provincial government and deal directly with the cities. The Canadian federal government will directly invest $ 2.05 billion into municipal infrastructure over six years.
The Winnipeg Development Agreement is another example of how the federal
government is involved in the long-term economic success of cities. Within this
agreement, the federal government will be directly spending over $ 25 million in the City
of Winnipeg to support its long-term economic success. The rest of the funding comes
from each level of government, and the programmes are delivered in co-operation with
the other two levels of government only after this has been approved by the Policy
Committee of Ministers and the mayors (OECD, 2002:161). Once again, it can be seen
that the federal government has circumvented the province and dealt directly with the
City of Winnipeg. In actual fact, the City of Winnipeg is far more fortunate than the City
of Toronto in this respect. The City of Toronto has no such agreement with the federal
government, and one of the empirical questions that will need to be investigated in the
case studies is how this fact has impacted upon the City of Toronto’s ability to formulate
its innovation policy.

Some observers might argue, however, that another federal initiative associated with
the so-called “New Deal for Cities” would help to counterbalance this lack of an urban
development agreement for the City of Toronto. In 2005, the federal government helped
to negotiate an agreement that saw it agree to transfer to local government, on an annual
basis, a portion of the federal revenue derived from the national gas tax. This revenue
from this gas tax is to be used by local government for projects that contribute to the
improvement of the environment and sustainable infrastructure. However, whether or not
this money would find its way into the City of Toronto’s innovation policy development
is a question worthy of further investigation. Moreover, one important point about this
program is certain: the resistance that is usually evident on the part of the provincial
government when it sees the federal government intrude into an area of provincial jurisdiction has been eased somewhat in this case. The reason why this has turned out to be the case can be attributed, once again, to the use of the federal spending power, as well as to the use of joint decision-making by the various levels of government involved in this process (OECD, 2007:179).

All of the above examples clearly illustrate the fact that the concept of multi-level governance in Canada is a highly relevant concept to be applied to innovation policy making in the City of Toronto. Indeed, this concept has to be applied to the municipal level of government given the fact that the City of Toronto is so deficient in revenues for this purpose. The property tax simply will not provide the kind of financial resources which are needed to mount an effective innovation policy that will bring about greater economic growth and development. The City has no choice but to continue its quest for these multi-level governance arrangements that operate outside of the traditional hierarchical, one-size-fits-all format while still allowing the City to tailor national policies to local conditions.

When we start to examine the empirical case studies, it will be interesting to see just how this joint decision-making by the various levels of government plays out at the federal, provincial and city level, since it is these various multi-level governance programs and activities that potentially produce a cluster-related innovation policy. Perhaps it will be the same, but perhaps it will also be different. In many ways these kinds of multi-level governance arrangements are highly advantageous to the city, since they allow the city the opportunity to help design its own policy rather than having it imposed upon them from the federal level alone.
Related Issues of Path Dependency

In addition to the three streams of literature discussed above, we take initial note of related issues raised by path dependency theory that are analytically useful for the analysis as a whole.

Paul Pierson suggests that “path dependency has become a faddish term, often lacking in clear meaning” and clear definition (Pierson, 2004:10; 2000:252). Yet definitions do exist, and they tend to fluctuate between a broader and narrower use of the term. Sewell (1996) who employs the broader definition suggests that path dependency implies that “what happened at an earlier point in time will affect the possible outcomes of a sequence of events occurring at a later point in time” (Sewell, 1996).

On the other hand, Margaret Levi adopts a narrower definition when she states that:

Path dependence has to mean, if it is to mean anything, that once a country or region has started down a track, the costs of reversal are very high. There will be other choice points, but the entrenchments of certain institutional arrangements obstruct an easy reversal of the initial choice. Perhaps the better metaphor is a tree, rather than a path. From the same trunk, there are many different branches and smaller branches. Although it is possible to turn around or to clamber from one to the other—and essential if the chosen branch dies—the branch on which a climber begins is the one he or she tends to follow (Levi, 1997:28).

Closely allied with the concept of path dependency is the idea of increasing returns. An increasing returns process is one where the probability of further steps along the same path increases with each step along the path. This is the case because the relative benefits of the present activity compared with any other possible options increases over time. Increasing returns processes are often referred to as self-reinforcing or positive feedback processes (Pierson, 2000:252).
Overall, this writer uses the term of path dependency in the narrower way, so that it means social processes that exhibit increasing returns.

Therefore in a setting where positive feedback mechanisms and increasing returns processes are in play, political life is more than likely to be characterized by the following four main features identified by Pierson:

1. Multiple equilibria. Under a certain set of conditions that are conducive to positive feedback, a range of outcomes is possible.
2. Contingency. If relatively small events occur at the right moment, they can have large and enduring consequences.
3. A critical role for timing and sequencing. In any path dependent process, when an event occurs is critical. Given the fact that early parts of a sequence are more important than later parts, an event that occurs “too late” will have no effect, but it might have been of great consequence if the timing of this event were different.
4. Inertia. After this kind of process has been established, positive feedback generally leads to a single equilibrium. Once this equilibrium is established, it becomes resistant to change (Pierson, 2004:44).

In the fields of political science, economics and history, as well as various other scholarly disciplines, the concept of path dependency commands considerable interest (Pollitt, 2008:40; Mahoney and Rueschemeyer, 2003; Thelen, 2003; Pierson, 2004). But when path dependency is applied to a public policy analysis such as this thesis, it is important not to see it as an analytical framework per se for this thesis. If path dependency can be called anything, it is an “empirical category, an organizing concept or
metaphor which can be used to label a certain type of temporal process” (Kay, 2006:30).

As Hall and Taylor (1996) have stated:

they [historical institutionalists] have been strong proponents of an image of social causation that is path dependent in the sense that it rejects the traditional postulate that the same operative forces will generate the same results everywhere in favour of the view that the effect of such forces will be mediated by the contextual features of a given situation often inherited from the past (Hall and Taylor, 1996:941).

So if we draw the threads of this discussion together, what stands out is that path dependency does seem to exist in the political and policy sphere; however, the mechanisms by which this comes about, and under what circumstances does significant change take place, are still highly contested and disputed. All of this will affect any public policy, including cluster-related innovation policy, and how it stays on track for the future. Hence we take note of its utility here and draw out further observations in Chapter 8 in relation to both our three literature streams and also our analytical framework in the context of the empirical evidence provided by the two case studies.

CONCLUSIONS

The chapter has developed the conceptual foundations for the analysis through a focused review of three streams of the literature: innovation policy and innovation, local government and multi-level governance.

The innovation policy and innovation literature stream has introduced us to the debate between those who think that innovation is best achieved using the linear model of innovation, versus those who think that innovation is achieved through the network-cluster non-linear approach to the problem. While the network-cluster model of
innovation has gained favour over the years, it has not succeeded in completely supplanting the linear model of innovation.

The literature on innovation itself has introduced us to the concept of the cluster. Clusters play a crucial and significant role in the formation of new knowledge and innovation. This takes place because of the spatial proximity of the cluster and how that spatial proximity relates to the use of certain types of knowledge. The two most important types of knowledge that are crucial for innovation are codified and tacit knowledge.

The literature stream on local government concentrated on key themes such as: local government structure and finance; the nature of leadership in a place-based policy making context; and its basic core relationship to multi-level governance.

The literature stream on multi-level governance has traced the history of the concept in both a EU and Canadian federalism context, and also stressed how multi-level governance contains complex vertical and horizontal dimensions. The term multi-level means that governments operate at an increased level of interdependence, cooperation and competition at different territorial levels. It also involves a growing interdependence between governments and non-governmental actors across those same territorial levels.

Also, the chapter has drawn some contextual conceptual links to path dependency theory and its useful discussion of temporal and inertial dimensions in the analysis as a whole.

All of this conceptual discussion helps shape the analytical framework that is examined in detail in Chapter 2 along with a discussion of the methodology employed. As always, the analytical framework must narrow the terrain actually covered in the local
government-focused analysis while still feeding off of some of the broader insights from the literature.
Chapter 2

ANALYTICAL FRAMEWORK AND METHODOLOGY

INTRODUCTION

With the conceptual and literature foundations established in Chapter 1, the purpose of this chapter is to present in more detail the analytical framework to be employed and also the research methodology involved. The first part of the chapter reiterates the three central arguments and the central research question. The second part focuses on the author’s analytical framework per se. The final part of the chapter explains the methodology employed, including the case study rationale and the primary research sources and secondary interview approaches that are being used. Conclusions then follow.

CENTRAL ARGUMENTS AND PRIMARY RESEARCH QUESTION

This dissertation is concerned with how cluster-related innovation policy is developed in the context of local government. To that end, three central lines of argument are put forward.

The first argument is that cluster-related innovation policy at the local government level, though it has the potential for eventual success, and though it is often touted as providing a very effective mechanism for leveraging a city’s limited amount of fiscal resources, suffers from a lack of conceptual clarity because it is embedded in a range of other related policies described and promoted in other ways including economic development policy, prosperity policy, competitiveness, and industrial sector policies.

The second argument is that cluster-related innovation policy at the local government level is likely to have only limited efficacy and impacts unless there are explicit sources
of multi-level governance financial support and strong multi-level governance coordination.

The third argument is that cluster-related innovation policy at the local level cannot be based on a one size fits all approach given that mega-cities such as Toronto face different challenges of scale and coordination, and given that clusters such as aerospace and fashion exhibit diverse innovation characteristics and coordination and cluster formation challenges.

All of these arguments are important because they go to the heart of what constitutes a cluster-related innovation policy strategy and whether or not it is effective in contributing to the growth of the cluster.

These arguments are important as well because they help answer the dissertation’s major research question: How have the concepts and practices of cluster-related innovation policy at the local level changed in the City of Toronto roughly in the last twelve years?

ANALYTICAL FRAMEWORK

As Table 2.1 shows, the author’s analytical framework consists of three main variables: (1) Leadership, (2) Local Government Finance, and (3) Multi-Level Governance Programs and Activities. These variables are used to examine and explain how cluster-related innovation policy changed as reflected in two cluster case studies (1) The Toronto Aerospace Cluster, and (2) The Toronto Fashion Cluster.
Table 2.1: Analytical Framework

Analytical Framework Variables for Analyzing Cluster-Related Innovation Policy at City Level

- Leadership
- Local Government Finance
- Multi-Level Governance Programs and Activities

The Leadership variable can involve overt power by individuals or institutions over others, or softer patterns of influence, guidance and learning based on expertise and knowledge. The nature of leadership is diverse in different political, institutional and organizational settings and in different situational circumstances such as crises, periods of financial and policy stability, and periods of change (Jones, 2007; Selznick, 1984; Wildavsky, 2004; Schneider and Teske, 1992). Leadership can accordingly be diverse perhaps all the more so in local “place-based” contexts.

As Chapter 1 has shown, there are mayors and councilors in city government, but there are no Ministers of the Crown, and there is no Cabinet in municipal government. Moreover, the overall pattern of decision making and policy making is also different in municipal government. As a result, related supplementary questions arise: Who exercises the leadership roles within municipal political institutions with respect to innovation policy and the formation of a cluster strategy? Does the Mayor exercise this leadership role? Or do individual bureaucrats have an important role to play here as well? What is the role of other elected politicians, including committee chairs of the Economic Development Committee, in the development of a cluster strategy? What other potential leadership actors are involved in this process?
To operationalize the leadership variable, part of the empirical evidence will come from the formal semi-structured interviews that have been conducted. However, in this instance that will not be good enough as a formal basis for establishing empirical evidence for the leadership variable and views about when leadership is evident. We shall also have to rely on any policy position papers, or policy documents and memos that were issued by the Mayor, or city councilors, which showed or implied that either or both were taking a leadership position on the issue of cluster-related innovation policy.

The **Local Government Finance variable** emerged as a crucial one from all three of the literature streams in Chapter 1, and with regard to the practical task of focusing on cluster-related innovation policy at the city/local government level. As Chapter 1 has shown, the City has limited financial resources. These financial resources are restricted to a collection of the property tax, along with some grants from the other levels of government. So the goal and the challenge for the City is to use its own resources in a focused way, while at the same time maximizing the federal and provincial resources being directed to cities overall, as well as to the City of Toronto in particular, in order to secure funding that could help cluster and innovation partners.

A careful look at the Local Government Finance variable will generate another series of questions. What is the role of the Economic Development budget? How much of this budget money goes to cluster-related innovation? What are the sources? How much money goes directly into innovation policy and clusters? Even though money from the Economic Development budget is crucial for the City’s cluster strategy, it will be important to determine what other sources of funds are used by the City for innovation and cluster strategies. Two further questions emerge here that need to be considered.
First, What other sources of funds can the City tap into? And second, How has the City financed cluster strategies to date?

The Local Government Finance variable thus involves the importance of leveraging the city’s financial base, but also doing so in the context of the existence of leveraged funds from more senior levels of government which are often unwilling to simply hand-out funds without condition or without showing that other sources of funding are also in evidence. The key supplementary questions that need to be further examined regarding the Finance variable are as follows: How has the City tried to do this? What mechanisms have they employed to try and leverage their financial base? How has the City itself had its cluster-related innovation strategies levered and altered by the policies and priorities of senior governments? How successful has this overall financial strategy been for the City?

Therefore, when the finance variable is unpacked, there are a number of related issues that require further analysis through the vehicle of the two cluster case studies. Of course, the whole question of targeting other private sector money needs to be kept in mind. Given their risk-averse nature, most of these other financial actors are unlikely to start a cluster; however the skills and abilities they possess are of great benefit to the clustering process.

Cluster-related innovation policy, as we have seen, is a complex process which involves a multiplicity of factors coming together over time to produce any given new innovative product, process, or organization. In some instances, innovation of this sort can come about with just a modest infusion of money; however, in a good many other
cases innovation will only come about if large sums of money are spent on R&D in other cluster participant institutions.

To operationalize the finance variable, the analysis will draw on information supplied by the City and other cluster-related innovation policy players. It also draws to some extent on information taken from the interviews.

The Multi-Level Governance Programs and Activities variable centres on the key role that the other two levels of government must play if the City is to engage in a cluster-related innovation policy. This refers again to other dimensions of finance and spending, but more particularly it involves looking at the nature of defined programs and activities both direct and indirect.

As we have already indicated in Chapter 1, the term multi-level means that governments today operate at an increased level of interdependence at different territorial levels. The term governance also means that there is a growing interdependence between governments and non-governmental actors across these same territorial levels (Bache and Flinders, 2004:3).

And it is precisely because of this increased interdependence at different territorial levels that the Multi-Level Governance Programs and Activities variable becomes crucial to explore. As we have already stated, cities in Canada operate under a system of constrained power that has its roots in the constitutional division of powers. Cities were purposefully denied any real constitutional status; as such, they were made into creatures of the provinces which determined just exactly what other legislative and fiscal powers cities would get from the province. Given this fact, within proscribed limits, cities are allowed to deal with issues of innovation. Therefore, when it comes to matters of cluster-
related innovation policy both the federal and provincial government have an absolutely vital and important role to play, but always in specific program and activity contexts. And in order for the City to tap into innovation, it is imperative that the federal and provincial government be present.

This federal and provincial presence manifests itself through the multi-level governance programs and activities that each respective layer of government makes available to the City or to other cluster partners. From an empirical perspective, operationalizing this variable is in some senses a less complicated task than is the case for the first two variables we have already highlighted. There are a fairly wide variety of publications that outline in specific terms the nature of the multi-level governance programs and activities that are being offered by each level of government. Our interviews also complement these primary sources.

However, problems remain regarding other limitations as to how far we can probe this variable. These include issues regarding the extent to which Toronto’s direct take-up on these programs and activities can be determined in terms of the city per se, as well as the indirect impacts of programs and activities aimed at or taken up by other cluster participants. This kind of very detailed and complex analysis has not been attempted. Instead, the focus of the analysis has been on mapping some of the basic programs and activities potentially available.

As important as the above three variables are, however, they are only operationally important analytically in relation to the two cluster case studies.
CASE STUDY SELECTION RATIONALE AND OVERALL METHODOLOGY

Case Study Selection Rationale

The case study selection rationale began by this researcher examining the city’s key policy documents, notably the *Economic Development Strategy* (2000), as well as the *Agenda for Prosperity* (2008). A study done by the Economic Development Division staff at the City of Toronto entitled *Cluster Overview* (2007) was also examined, as was the City of Toronto’s website dealing with their Economic Development Division and their work on sectors for their cluster strategies.

Based upon the above, as well as some strategic preliminary interviews with the City’s Economic Development Division staff members, it became apparent that some sector strategies were longer running. Therefore one wanted to pick sectors that had more of a history. Some Economic Development Division staff had targeted and identified certain sectors as important; but upon closer examination it became obvious that not a lot of work had been done on them.

In the preliminary interviews that were conducted by this researcher, the aerospace sector and the apparel/fashion sector were identified as having a lot of work done on them, and they were also said to be representative of what the City was trying to do when it came to developing a cluster-related innovation policy.

In the case of the aerospace sector, the controversy around the development of the “C” series jet, and whether or not the aerospace sector in Toronto could compete with the aerospace sector in Montreal gave it greater saliency. The Toronto aerospace sector has a one hundred year history in Toronto, and in Canada in general, so this added to the importance for this case study.
The historical significance of the apparel/fashion sector also made it an important sector to study. Apparel has been made in the city of Toronto for over one hundred years, but the time and attention that the City of Toronto, through its Economic Development Division, has put into developing the Toronto Fashion Incubator (TFI) as a vehicle for the evolving fashion sector that is now stressing the importance of creativity and design in its clothing also makes this sector an important sector to study. Increasingly, it is becoming apparent that the generation of economic value is dependent upon the ability of firms, in many sectors, to embed creativity and design into the goods and services they produce. This is no less the case for the apparel/fashion sector where creative fashion designers are engaging in developing their design skills in new and innovative ways, so much so that the linking together of manufacturing with design is becoming more and more important to the fashion sector if it is to survive and thrive in Canada (Rosen, 2007:11-12).

Therefore it can be seen that these two case study and cluster-related innovation policy realms have been selected overall so as to represent quite different sectors. The first case study is based in a traditional industrial sector, and the second case study, while having a significant industrial history, represents increasingly a service and artistic-based design sector.

Having delineated how and why the case studies were selected, the following paragraphs provide further reflection on the reasons for their choice

The Toronto Aerospace Cluster represents a traditional manufacturing sector that may be facing a decline in importance in the coming years. The aerospace sector is one of Ontario’s leading high technology sectors. Exports comprise 75 per cent of the sector’s output. It contributes strongly to the provincial trade balance of payments, and is one of
the few high technology sectors in which Ontario has a trade surplus. This sector is an important contributor to the Ontario economy, accounting for 1.5 per cent of the provincial gross product; it has significant linkages to supplier industries, including computer software, metalworking and telecommunications and materials (Ontario Aerospace Ministerial Advisory Committee, 1994:15). However, over the past number of years, the aerospace sector has been impacted by a worldwide slowdown, intense competitive pressure and rapid technological change. It is important to conduct a detailed analysis of this sector to see if new strategies can enable it to survive and thrive in the future, and to see how the three variables play out and interact in its overall evolution in the Toronto city context.

The second case study, the Toronto Fashion Cluster, is indicative of an industry sector that is arguably more typical of newer industries that will generate wealth for the City of Toronto and its citizens and businesses in the future. The apparel/fashion sector in Toronto employs almost 50,000 people, and more than half of them are employed in manufacturing, but others are employed in the design aspect of the sector. The City of Toronto is home to more than 550 apparel manufacturers whose wholesale shipments are worth more than $1.4 billion annually, or 16 per cent of the $9 billion Canadian market.

The very fact that the Toronto Fashion cluster is indicative of an industry sector that will generate wealth for the city can clearly be seen in the way in which the City of Toronto has tried to develop this cluster from the start. Once the City realized that recently graduated designers could not obtain a foothold upon the employment ladder in their chosen career path, they decided to create a place for them to begin this journey. To this end, the City, through its sister corporation, TEDCO, the Toronto Economic
Development Corporation, purchased a building in the city, equipped it with state-of-the-art design equipment: sewing machines, cutting machines, pattern-making machines, etc. and then the City set to work to create the conditions, within this building, to allow this designer talent to flourish. A mentorship program was also established that linked young designers with established designers who were already a success in their field. In sum, the Toronto Fashion Cluster combines the best elements of the learning economy: creativity and innovation.

A much more detailed examination of this cluster is needed to determine what lessons can be learned for other clusters in the City of Toronto. This is the case because the way in which this cluster was developed points to another important issue: it will be imperative to develop an understanding of what other policy and administrative tools the City has available, outside of its innovation budget, to support its cluster strategies. For example, in the case of the Toronto Fashion Cluster, a much more detailed analysis of TEDCO needs to be undertaken in order to understand the critical role it played in helping to seed this cluster.

**Overall Methodology**

In the above Toronto-focused case study context, an overall qualitative research methodology is necessarily employed for this dissertation. The analysis of these case studies is undertaken and developed by using two techniques. The first technique will consist of a systematic exploration of existing documentation from the City of Toronto on their cluster-related innovation policies. These documents will be used to provide background information and context for the central research question being investigated. Related documents from the federal and provincial governments are also drawn on.
Semi-structured confidential interviews complement the primary sources and are used to provide subtlety and dynamics regarding how and why cluster-related innovation policy evolves and changes and/or fails to progress. There are a number of other reasons for choosing this secondary research method approach. First, the semi-structured interview technique allows the interviewer to ask a predetermined number of questions, while also affording the interviewer the opportunity to deal with any unplanned situations and questions that may arise. Keeping the interview confidential allows the interviewer to obtain a much more candid type of interview and set of insights in the first place. This is the case because many bureaucrats and high-ranking officials will not be as forthcoming in the answers they give to an interviewer’s questions if they know that their names will be released for the public to see. Experience has shown that confidential interviews yields useful complementary views and information. To meet crucial research ethics requirements, there will be no individual attribution to interviewees.

The snowball technique has been employed to generate further interviews (Good, 1980: 200; Noy, 2008; Odendhal and Shaw, 2001). Interviews were held first with selected insiders who had the time to answer the questions of the researcher. As information is acquired by asking specific questions, and following-up on any answers that appear to be ambiguous and unclear, a small knowledge base is created, and with subsequently more interviews, it grew. As trust is established, the researcher used the initial contacts to snowball for further interviews. This is accomplished by asking the original contacts to whom do they think the researcher should speak to so that further views and information can be obtained.
An Interview Guide (see Appendix A) was used to interview the following types of people: City officials, bureaucrats, and private sector actors who are involved in the open development of these clusters. Within these categories, people were interviewed at different hierarchical levels so that the best possible information and related views can be obtained for analysis.

CONCLUSIONS

With the conceptual and literature foundations established in Chapter 1, the purpose of this chapter has been to present in more detail the analytical framework to be employed and also the methodology that will be used in this thesis. This chapter has presented the author’s analytical framework which consists of three central variables: (1) Leadership, (2) Local Government Finance, and (3) Multi-Level Governance Programs and Activities. These variables are incorporated into a matrix that was designed as a three by two research grid so that we could examine change in two quite different cluster case studies: (1) The Toronto Aerospace Cluster, and (2) The Toronto Fashion Cluster.

The chapter has also set out the overall methodology employed including both the rationale for the selection of the two case studies, as well as the nature of the qualitative approach taken in the research, consisting of both primary published sources and reports and secondary complementary confidential interviews.
INTRODUCTION

The purpose of this chapter is to provide the historical development of the aerospace sector in the province of Ontario within Canada as a necessary context for the empirical analysis of cluster-related innovation policy in Part II. In today’s public policy climate a great deal tends to be made of the fact that the aerospace industry has now become a cluster. Claims are made that innovation and cluster policy marks a transformation from an earlier focus on industrial policy. However, any new developments in policy do not just appear out of nothing; they usually have their seeds sown in prior developments.

Although the focus of the dissertation is not conceptually on industrial policy, the goal of this chapter is to develop a deeper understanding of what those prior industrial policy and related developments were. The first part of this chapter looks at the aerospace industry’s context and history as an industrial policy sector, while the second part of the chapter looks at the market and state-led development of Canadian aerospace.

Conclusions then follow.

THE AEROSPACE INDUSTRY: CONTEXT AND HISTORY AS AN INDUSTRIAL POLICY SECTOR

Current Industry Structure

The Province of Ontario’s aerospace sector is comprised of three tiers of companies. A Tier One type of firm is a large, integrated company, which employs several thousand workers. Overall such firms account for 40 per cent of the Canadian sector’s annual
output. But there are very few Tier One firms in the province of Ontario. Tier One firms design, market and manufacture complete aircraft, aero engines and space systems. These firms compete in the global marketplace.

Tier Two firms are comprised of companies that are deemed to be systems and proprietary products manufacturers supplying Tier One firms which are located predominantly outside of Ontario and Canada. There are a lot of Tier Two firms in Ontario; however, while this Tier is strong in Ontario it is also unbalanced in that Ontario has a number of strong systems firms, but there are few engineered product specialists. These Tier Two firms account for about 40 per cent of the Canadian sector’s output. This second Tier is made up of companies that are predominantly foreign-owned multinationals that design and manufacture major systems and subsystems and highly engineered proprietary products (Ontario Aerospace Ministerial Advisory Committee, 1994:22).

Finally, Tier Three firms are comprised of mostly small Canadian owner-managed businesses and they have an annual output of less than $20 million. The role of Tier Three firms is to act primarily as suppliers and subcontractors, and they account for the remaining 20 per cent of this sector’s output. In essence what Tier Three firms do is to provide a strong aerospace infrastructure that supplies Tier One and Tier Two companies in Canada (Ontario Aerospace Ministerial Advisory Committee, 1994:22).

The aerospace cluster in Ontario needs to be placed within the context of the overall Canadian scene. The aerospace sector is a jewel-in-the-crown of Canada’s manufacturing and high-tech industries. The most important data on this industry are summarized in Table 3.1 below (Canadian Aerospace Facts and Figures 2009).
The Canadian aerospace industry is the fourth largest in the world. It employs 83,000 people, over 12,000 of whom are engineers and scientists, as well as over another 20,000 people who are technicians and technologists. The Canadian aerospace industry is also the third largest manufacturer of civil aircraft in the world.

Table 3.1  Canadian Aerospace Facts and Figures 2009

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Revenues</td>
<td>$23.6 billion</td>
</tr>
<tr>
<td>Annual Exports</td>
<td>$19.3 billion</td>
</tr>
<tr>
<td>Annual Trade Surplus</td>
<td>$2.6 billion</td>
</tr>
<tr>
<td>Direct Contribution to GDP</td>
<td>2.8%</td>
</tr>
<tr>
<td>Employees</td>
<td>83,000</td>
</tr>
<tr>
<td>Scientists and Engineers</td>
<td>12,000</td>
</tr>
<tr>
<td>Technicians and Technologists</td>
<td>20,000</td>
</tr>
<tr>
<td>Total Salaries and Wages</td>
<td>$3.5 billion</td>
</tr>
<tr>
<td>Average Annual Salary</td>
<td>$62,608</td>
</tr>
<tr>
<td>Sales by Market Segment</td>
<td></td>
</tr>
<tr>
<td>Commercial Aviation</td>
<td>$18.2 billion</td>
</tr>
<tr>
<td>Defence and Security</td>
<td>$5.4 billion</td>
</tr>
<tr>
<td>Space</td>
<td>$0.5 billion</td>
</tr>
<tr>
<td>Annual Investment in R&amp;D</td>
<td>$1.3 billion</td>
</tr>
</tbody>
</table>


What is produced in Canada is made predominantly for the civil and commercial market: eighty per cent of Canadian production goes to civil markets compared to forty-four per cent in the United States where defence industry markets loom larger. Moreover, the Canadian aerospace sector is a pillar of the Canadian economy. Seventy-seven per cent of what is produced in Canada is exported; and much of this export activity is directed to the United States. Exports to the United States accounted for eighty-five per cent of Canadian aerospace industry sales in 2009.
In terms of industrial Research and Development (R & D), the aerospace sector is a major player. Twelve per cent of all industrial R & D in Canada is conducted within the aerospace sector. Firms within this industry spent over $1.3 billion on aerospace R & D in 2009. The aerospace industry has a presence in all the provinces in Canada.

As Table 3.1 shows, incomes in the aerospace industry are quite high. The high incomes are a reflection of the advanced productivity and high skills of the workforce. The average gross salary of an aerospace worker was over $62,000 per annum; and wages averaged $27.00 per hour. The incomes of the people who work in the aerospace industry are two-thirds higher than the Canadian economy as a whole (http://www.ic.gc.ca/cis-sic.nsf/IDE/cis-sic3364sale.html).

Total salaries and wages paid out to aircraft workers amounted to some $3.5 billion in 2009. This is an important point because it is these same workers who pay well over $500 million a year in direct income and payroll taxes, and they also pay in excess of another $250 million in federal and provincial sales taxes once they begin to spend their disposable income (http://www.ic.gc.ca/cis-sic.nsf/IDE/cis-sic3364sale.html).

Within the aerospace industry, there is a wide range of different firms that are producing for specific niche markets. For example, some firms such as Bombardier and Boeing are producing complete aircraft systems; other firms such as Pratt and Whitney are world renowned for the jet engines they produce. Moreover, as noted earlier, a great deal of aerospace production in Canada is exported to international markets. Figures from Industry Canada indicate that the aircraft and aircraft parts industries exported $19.3 billion worth of products in 2009. This was offset by the $16.7 billion worth of imports that came into this country. This left Canada with a $2.6 billion trade surplus, and this
trade surplus was the largest of any high value Canadian manufacturing industry (www.ic.gc.ca/scmrkti/tdst/tdo/tdo.php.html). Imports, however, are somewhat more diversified in that Canada imports 60 per cent of aerospace products from the U.S. and 40 per cent from other countries.

Finally, it needs to be stated that the aerospace sector in Canada is truly a national industry. While it is true that the province of Quebec accounts for over half of the total aerospace employment in Canada, the province of Ontario also accounts for about one-third of all the aerospace jobs. The aerospace industry in Ontario tends to be concentrated in the Toronto area. Labour force statistics, from the year 2002, indicate that the aerospace industry in the Toronto area employed 11,800 people, and this translates into 65 per cent of all Ontario employment and 19 per cent of all Canadian employment for this sector. However, employment has decreased about five per cent from 1999 to 2004, given changing domestic and international economic trends affecting the industry (City of Toronto, Toronto Economic Development, 2003). Available at: http://www.toronto.ca/tobusiness/march04.htm

That being said, there is no denying the fact that there is still a critical mass of aerospace firms and suppliers in Ontario. According to the literature on this subject, these firms have a number of key strategic advantages including the following:

(i) Ontario is located in the centre of North America’s manufacturing heartland;
(ii) There are transportation and communication networks that are recognized as being the best in the world;
(iii) Ontario has a highly efficient and cost-competitive business climate;
(iv) The province has a highly skilled workforce and leading-edge learning institutions;
(v) There are competitive tax incentives for research and product development;
(vi) An exceptional quality of life exists in Ontario (Canadian Auto Workers, 2004; City of Toronto, Economic Development and Parks, 2004).
Overall, the Ontario aerospace sector is composed of a network of more than 350 companies, and these companies are focused primarily on systems and equipment. They provide a broad range of aerospace and aviation design, manufacturing and product support for the global industry (City of Toronto, Economic Development and Parks, 2004).

Ontario firms are also world leaders in a number of niche markets such as the following shown in Table 3.2

<table>
<thead>
<tr>
<th>Market Niche</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight Simulators</td>
<td>Atlantis, CAE</td>
</tr>
<tr>
<td>Aircraft Satcom Systems</td>
<td>CMC, EMS</td>
</tr>
<tr>
<td>Conversion/Upgrade/Retrofit</td>
<td>L-3, Field, Cascade, Kelowna</td>
</tr>
<tr>
<td>Integrated Space Robotics Systems</td>
<td>MDA</td>
</tr>
<tr>
<td>Satellite Multiplexes and Switches</td>
<td>ComDev</td>
</tr>
</tbody>
</table>

Source: Ontario Aerospace Council, Ontario Aerospace, November 2006

However, Manitoba and Nova Scotia are also important centres for regional employment of aerospace producers; in 2004, these two provinces had a combined total of over 5,000 aerospace jobs between them (Statistics Canada, 2008 (72F00023XCB) Annual Estimates of Employment, Earnings and Hours, 1991-2007. Available at: [http://datalib.chass.utoronto.ca/inventory/3000/3798.htm](http://datalib.chass.utoronto.ca/inventory/3000/3798.htm)). Just how Canada got to be such an important aerospace producer will be discussed in the next section.
MARKET AND STATE-LED DEVELOPMENT OF CANADIAN AEROSPACE

That a small, northern country, like Canada could grow over time to become the world’s third largest aerospace supplier is no small achievement. What market and state-led factors have historically propelled this development?

Those who advocate a free market approach to economic development think that getting the fundamentals right is all that is required for industrial success. They believe that if taxes are kept low, free trade is enacted and privatization is allowed to predominate in business, so that the “animal spirits” of capitalism are unleashed, then a country will automatically enjoy economic success in a mix of industries.

Canadian aerospace history, however, shows that if this industry had been left solely in the hands of the corporations, and market forces, it is highly doubtful that Canada would have an aerospace industry worth talking about, let alone the world-class entity that has been built up over many decades.

Canada’s aerospace and aviation industry has a long history, a history that goes back almost one hundred years. This history shows that there has been an active and flexible partnership between business and government. In the beginning, the goal of this partnership was to develop leading-edge aerospace capabilities; as time progressed, however, the goal was to ensure that there was sufficient demand for Canadian made products (Canadian Auto Workers, 2004:14; Laux and Molot, 1988).

The history of Canadian aerospace clearly illustrates the point that governments have always had to intervene in the market in order to support the industry. Governments have gone about doing this in four principal ways: (1) public procurement, (2) direct
ownership, (3) active program support, and (4) sales financing. Each of these are looked at briefly in turn.

**Public Procurement**

Public procurement has played a role in the domestic development of Canada’s aerospace industry. When Canada entered World War II, Canada’s aerospace sector manufactured and supplied over 16,000 fighter aircraft, such as the Gypsy Moth, the Lancaster bomber and the Mosquito for the Allied war effort. In the post war and Cold War era that followed, Canadian governments were successful in leveraging further investments through so-called “offset” agreements with major United States suppliers. This was accomplished in part through the terms of the Defence Production Sharing Agreement (DPSA). The DPSA was very similar to the later Canadian auto pact, but in this case it was applied to the military defence production industry. Under the terms of this agreement, Canada was able to ensure that defence purchases were treated in a proportionate manner relative to US purchases, thus assuring that a significant amount of business went to Canadian-based facilities.

This mode of intervention continued into the 1980s when the Government of Canada leveraged major aircraft purchases by the then state owned (and later privatized) Air Canada into investments in the Canadian facilities of Boeing, McDonnell-Douglas and other suppliers.

Thus any major purchase by Air Canada would be linked to so-called “offset” work at the major Canadian plants. So when Air Canada purchased Douglas DC-9s in the 1960s, this led to the firm’s decision to produce wings for that particular aircraft in Malton,
Ontario. Moreover, Air Canada’s purchases of 747 and 767 aircraft from Boeing during the 1970s also led to significant new investments in Canadian facilities.

However, under the Mulroney Conservative government of the 1980s, changes were made to these kinds of policy instruments. Air Canada was fully privatized, and from that point forward, the Canadian government decided not to link the subsequent purchase of aircraft to Canadian aerospace investment and production (Langford and Huffman, 1988). Since the late 1980s, Air Canada has purchased $5 billion worth of new aircraft from the European consortium of Airbus Industrie and there has not been any “trickle down” subcontracting to Canadian-based aerospace firms.

A combination of decreased military spending in certain areas, along with the full privatization of Air Canada, brought about a “hands-off” attitude on the part of the federal government when it came to using public procurement as a vehicle for industrial development (McFetridge, 1985, Doern, 1990, Laux and Molot, 1988, Doern and Atherton, 1986, Doern and Tupper, 1988, Langford, 1981, Langford and Huffman, 1988). However, some support via regional development programs continued.

**Direct Ownership**

The outright public ownership of important aerospace firms in Canada was also another way of supporting Canada’s domestic aerospace industry. There have been several times when such actions have taken place in Canada.

Aircraft production in Canada began after World War I. At that time Canadian Vickers, a subsidiary of British Vickers, set up an aircraft division close to Montreal that designed and manufactured amphibious planes. British de Havilland also incorporated a firm, de Havilland Canada, in Toronto to assemble and manufacture small planes for the
Air Force. Once Canada entered World War II, however, the coordination of production involved both nationalization as well as the creation of state-owned enterprises, including the airplane manufacturer Victory Aircraft.

After World War II ended, Victory Aircraft was sold to the British firm of Hawker Siddeley in 1945. British Vickers, sensing a reduction in orders for aircraft after the war, decided to divest itself of aircraft production altogether. Therefore, rather than close down the plant it was leasing to Vickers, Ottawa established a new Crown corporation in 1944. They called it Canadair and gave it an order for a new plane, the North Star, which was intended for civilian use by government owned Trans-Canada Airlines. However, as soon as a suitable private sector investor was found, Ottawa sold the firm in 1947 through a lease-purchase agreement. The American parent company was reorganized shortly after the sale, and it became known as General Dynamics. Once General Dynamics was formed, it was assured of substantial orders for the North Star, and the firm also received a Canadian government contract to develop a new fighter aircraft (Laux and Molot, 1988:88-89).

The story of Canadian government involvement in the aerospace world does not end with the purchase of Canadair by General Dynamics. In an ironic twist of fate, and more than twenty-five years later, the federal government once again purchased Canadair from General Dynamics in 1976. The federal government continued to own Canadair until Bombardier’s aerospace division was created (Laux and Molot, 1988:88; Rae, 1996:151).

Canada’s premiere aerospace manufacturer, Bombardier Aerospace, is a prime example of the federal government’s desire to invest directly into this industry. Bombardier’s aerospace division was created out of assets that were once publicly
owned. Bombardier took control of the Montreal based Canadair, a firm that was once federally owned, in 1986. At that time Bombardier paid $120 million for this company, while the federal government promised Bombardier that it would absorb over $1 billion of Canadair’s debt. The Mulroney Conservative government also awarded a $1.4 billion CF-18 overhaul contract for the Canadian military to Bombardier. This provided a vitally important critical boost in business for the newly formed firm (Canadian Auto Workers, 2004:15).

Bombardier also had another major firm within its aerospace division and that was de Havilland Aircraft. This firm had a long history of public ownership as well. In 1974, the federal government invested in de Havilland so that it could secure its future as a manufacturer of whole aircraft. After some years elapsed, however, this firm was sold to Boeing in 1986. Even though it appeared that the days of government ownership were over for de Havilland, this would prove not to be the case.

In 1992, the then premier of the province of Ontario, Bob Rae, and his New Democratic Party government purchased a 49 per cent share in de Havilland Aircraft from Boeing at a cost to the provincial government of $49 million. In the meantime, Bombardier purchased the remaining 51 per cent share of de Havilland, and once the time was right, they also purchased the government’s minority share by exercising an option to buy these shares that was contained within the original agreement (Rae, 1996:154).

During the time that Bombardier was absorbing de Havilland’s assets it was also given further assistance. Both the federal and provincial governments agreed to provide over $300 million in direct government loans, repayable research and development funds, and
sales financing support for this new division (Canadian Auto Workers, 2004:15; Rae, 1996).

What all of the above examples clearly illustrate is that without the willingness of governments to directly invest in aerospace manufacturing facilities and firms, a very good argument can be made that Bombardier might never have become a major producer of aircraft in Canada. And it certainly would not have become the world’s third largest aerospace producer had the above interventions not taken place. Notwithstanding the very good management decisions that were made by the management team of this firm, the fact remains that Bombardier needed the ongoing support of government, along with repeated bouts of direct public ownership, if it was to attain the success that it has achieved over these many years.

In today’s environment, however, the strategic use of public ownership as a policy instrument has fallen out of favour with governments. Many governments have sold off their Crown corporations with a view that the private sector can now produce better results. While this may be the current thinking on this matter, the historical experience of aerospace provides us with clear evidence that Canada’s aerospace sector could never have developed without “significant and timely public investment” (Laux and Molot, 1988, Doern and Tupper, 1981, Langford and Huffman, 1988).

**Active Program Support**

Over the years a number of key programs have been developed whose aim has been to assist aerospace firms with the development and commercial production of important product lines. A much fuller description of some of these programs will be forthcoming when we analyze in Chapter 5 the variable of multi-level governance programs and
activities, but for now a brief reference to some of these programs is important in a historical context.

One of the most important programs which was developed, in 1959, was Canada’s former Defence Industry Productivity Program (DIPP). This program provided money to support the development of new technologies and new products within the aerospace industry. Once this program was finished, it was succeeded by the Technology Partnerships Canada (TPC) program; this program played a similar role to that of the DIPP program except that it involved a broader range of industries (Wolfe, 1999). The TPC program mandate was to provide funding support for research and development. It accomplished this goal through leveraging private investment in new technologies and programs in various technology centred industries, including aerospace. The money for this program was in the form of repayable loans. The TPC program has been reasonably successful, and many aerospace firms have taken advantage of the money and used it to further advance their own research and development work.

Sales and Export Financing Support

Over the years, sales financing support has become another very important policy instrument for governments to use in their continuing support of the Canadian aerospace sector. The aim and objective of sales and export financing support is to offer loan guarantees, as well as other forms of preferential financing, to the customers that purchase Canadian-made aircraft and equipment. Most of these customers tend to come from the airline industry. This preferential financing is important because it reduces the purchase price of Canadian-made aircraft.
Even though the federal government can provide sales financing directly to the customer, the more commonly used route is to offer it indirectly through a government agency. Very often the Export Development Corporation is used for this purpose since it is a federal Crown corporation that offers loan guarantees, along with other forms of assistance, to Canadian exporters (Laux and Molot, 1988:57).

Sales financing is important for others reasons as well, since it can be a very low-cost way of supporting domestic aerospace production. The logic of how this works is quite simple: when the government provides a loan guarantee to the customer, it allows that customer to access loans at preferable interest rates; this in turn allows the customer to purchase the Canadian-made equipment at a reduced rate, but at the same time it also means that the out-of-pocket cost to the government is small. Moreover, if one assumes that this customer will not default on the loan, then the cost to the government is essentially zero. And even if the customer were to default on the loan, the government can repossess the equipment and sell it to another customer. This is neither a difficult nor a time consuming process today given the fact that recent international negotiations have made it much easier for lenders to repossess aircraft from customers who do not keep up with their loan payments. The Cape Town Protocol, which was negotiated in 2001, will establish an international registry of major aircraft and their owners; thus the establishment of this new Protocol is expected to reduce the risk of financing new aircraft purchases even further than in the past (Canadian Auto Workers, 2004:18).

But as important as aerospace has been to Canada’s economic well being in the past, the fact of the matter is that the world of today is a very different place than it was after the end of World War II when the first substantial seeds of Canadian aerospace success
were planted. In specific terms, the political economy of the world is being propelled by political, economic, social and technological forces that were unimaginable over sixty years ago.

Sixty years ago, as the other countries of the world struggled to reinvigorate their own domestic economies, only the United States and Canada emerged from the perils of war with its entire economy intact. Indeed, the United States emerged from World War II as an economic colossus. There were many goods that only the United States could manufacture competitively, and there were some other goods that only the United States could manufacture period. After 1945, half of all the world’s goods and services were being produced in the United States (Laxer, 1987:xviii).

This golden age of capitalism was predicated upon a particular system of production that came to be known as Fordism. Fordism consisted of using a factory-style system to create the mass production of a standardized product for mass consumption. Canada benefited from this era of Fordist mass production as American firms set up branch plants in Canada to manufacture various products. From 1945 until 1973, this system of mass production worked well in both countries. However, by the early 1970s, there were signs that the system of mass production was starting to decline from its dominant role as the deliverer of employment, growth and innovation. A new system of production started to emerge, and this new system of production has been called various names such as post-Fordism, flexible specialization of production and the knowledge economy (Storper and Scott, 2009:159).

Moreover, around this same time period there were other economic developments taking place that were simultaneously both exciting as well as challenging. Out of the
ashes of the old economy, a new economic techno-paradigm was emerging. The drivers of this new techno-paradigm were the microprocessor, the computer and various other digital technologies that would revolutionize the entire world. These technologies helped to usher in the era of economic globalization (Archibugi and Michie, 1997; Castells, 2000).

This era of economic globalization is fuelled by the increasing importance of knowledge and innovation for the production of new products and services in the economy. Instead of the old factors of production, which consisted of land, labour and capital, knowledge is now the new currency for those countries that seek prosperity in the 21st century.

All of the above is vitally important to our discussion of the aerospace sector because the Canadian aerospace industry grew from its earliest beginnings and matured into the key economic player of the Canadian economy that it has become during the time that the Fordist system of production was dominant. But now that things have changed within the Canadian economy a key public policy question that must be answered is this: How will the aerospace sector continue to survive and thrive in this new model of the knowledge-based economy, an economy in which the national system of innovation, as well as the cluster-related regional system of innovation, now occupy a place of importance conceptually and practically in Canada’s future economic development?

This is an important question to ask because the fact of the matter is that no two countries possess the same mix of innovative resources within their innovation systems. An equally important concern within each type of innovation system is the degree of connectedness that exists between the various components of the system. For example,
how easily do knowledge flows, scientific discoveries and other highly skilled and important resources flow across the system? If the answers to these questions are found to be less than positive, then the entire effectiveness of cluster-related innovation policy will be called into question. By examining the empirical evidence of our first case study in Chapter 5, which deals with the aerospace cluster, some answers to these important questions begin to emerge, as do new further problematic questions and challenges.

CONCLUSIONS

This chapter has highlighted the historical development of the aerospace sector within Ontario and Canada. The context and the history of the aerospace sector in Ontario was first examined by setting it in a national context. Within this context policy in the first few decades of the post-World War II era was anchored more in the use of an array of industrial policy approaches and instruments. Thus, several conclusions stand out and are worthy of restatement.

First, the development of the aerospace sector in the City of Toronto has a one hundred year history. Indeed, within Ontario and Canada as a whole, Canada’s aerospace and aviation industry has had a long history as well. And if one looks throughout that history, one can glimpse one recurring reason for its success: all during this time governments have had to intervene in the market in order to support the aerospace industry in Canada. Moreover, governments have gone about doing this in four principal ways using mechanisms such as (1) public procurement, (2) direct ownership, (3) active program support, and (4) sales export financing.
Second, during this time period, there has been an active and flexible partnership between business and government. In the beginning, the goal of this partnership was to develop leading-edge aerospace capabilities; as time progressed, however, the goal was to ensure that there was sufficient demand for our Canadian made products.

Finally, as important as aerospace has been to Canada’s economic well being in the past, the fact of the matter is that the world of today is a very different place from the world in which aerospace technology really began to develop over sixty years ago. Sixty years ago, the success of the aerospace sector was predicated upon an economic system of mass production know as Fordism. Today, a new techno-economic paradigm has emerged, one that is driven by the microprocessor, the computer and other various forms of digital technologies which have revolutionized the world. This so-called knowledge-based economy is driven by ideas and innovation.

So now that things have changed within the Canadian economy, a key public policy question that must be answered is this: How will the aerospace sector continue to survive and thrive in this new model of the knowledge-based economy in which the national system of innovation and the cluster-related regional system of innovation now occupy a place of importance in Canada’s, Ontario’s and Toronto’s future economic development?
Chapter 4

THE HISTORICAL DEVELOPMENT OF THE GARMENT/ FASHION SECTOR

INTRODUCTION

The purpose of this chapter is to provide the historical development of and context for Toronto’s eventual fashion cluster by looking at the origins and evolution of the precursor garment industry over its 100-year history. As we will see, the industry in historical terms has been referred to variously as the garment, apparel, clothing and also textile industry, and only in the last two decades as the fashion industry or sector when a greater cluster-related innovation policy focus emerged regarding design and creativity.

The first part of this chapter looks at the industry’s context and history as a garment industry. The second part looks at the problems the garment and later fashion sector has had to contend with since Canada-U.S. and later North American trade liberalization agreements have come into existence in the 1980s and 1990s. It also briefly profiles in a third section the current basic structure of the industry. Conclusions then follow.

THE FORMATIVE GARMENT INDUSTRY’S CONTEXT AND HISTORY

While it is no secret that the development of any industry requires the talents of many different people who come from many ethnic backgrounds, a unique historical difference that sets the fashion industry apart in Toronto historically is that the birth of this industry was to a great and substantial degree almost entirely a result of the Jewish community in Toronto. While it is true that there certainly were a number of workers in this industry who were of Anglo-Celtic origins, a very good argument can be made that if it were not for the influx of Jewish workers into this industry, the fashion sector may not have been
developed in Toronto. This accomplishment in socio-economic history needs to be both acknowledged and explained.

At the beginning of the twentieth century, many immigrant Jews arrived in Toronto hoping to leave behind the economic difficulties and anti-Semitic persecution that they encountered in Eastern Europe. Unfortunately, once they had arrived in Canada they found an environment that was both discriminatory and anti-Semitic. Forbidden by law from owning property, and deprived of any opportunities to join the professions, the Jewish community was forced initially to look for work in the garment industry. Once this began to occur, the industry was constantly fuelled by this source of cheap labour. By the end of 1900, the garment industry workforce was largely Jewish. Once we reach 1911, however, the Jewish community dominated this industry. For example, eighty percent of the tailors who were employed at the Eaton’s factory were Jewish (Taylor, 2003:3-7). By the time that we reach the 1930s statistics available for 1931 indicate that roughly one out of three people who were Jewish were employed in this sector, as opposed to one out of twenty other Torontonians who were gainfully employed at that time. Moreover, the concentration of Jewish people in this industry in the whole of North America represented one of the highest rates of occupational concentration of any immigrant group (Frager, 1992:16).

The Jewish community was drawn into this labour-intensive industry in large part because it was an industry that provided many jobs in this period of Toronto’s economic development. In fact, in early twentieth-century Toronto the clothing industry employed more people than any other industry. One of the unique features of the garment industry is that not only did it provide jobs for men, but it also provided employment for women.
This source of income was very important to impoverished immigrant families since it must be stressed that during this time period in Canada’s development as a nation, job opportunities for women were very limited (Frager, 1992:17).

However, there were other reasons why the Jewish people were attracted to this industry as well. Many of these Jewish workers had entrepreneurial aspirations and they were attracted to the garment industry because the expectation was that one could become a clothing contractor, or small manufacturer, without having to invest much capital (Frager, 1992:17).

It was not long before this highly concentrated group of people started to carve out a geographic space for their existence as well as for their working lives. In the early 1900s, the centre of the garment industry was found in an area known as St. John’s Ward, an area bounded by Queen Street, College Street, and Yonge Street. This part of Toronto housed the Eaton factory as well as many other garment factories and home sewing workshops. By 1910, however, the area around Spadina Avenue and Adelaide Street became the new centre of the garment industry. Large buildings were constructed in order to house a growing number of manufacturers. Buildings such as the Balfor, Darling and the Fashion building are still visible in the Spadina area today. And remnants of what was once a much larger garment/apparel district and industry can still be found on Spadina Ave. as well. Today one can still find furriers, leather manufacturers, retail clothing stores and the occasional clothing factory (Taylor, 2003:10).

However, even as the entrepreneurial seeds were being planted for a robust fashion district to take root, social problems began to emerge that would challenge the future livelihood of this industry. Why was this the case?
The answer to this question lies in the fact that the garment industry was unstable by its very nature. This instability can be attributed to a number of factors. One of the biggest factors was that clothing styles changed with great frequency; another factor was the fact that seasonal variations existed in the demand for clothing. Instability was also exacerbated by the fact that the demand for clothing was sensitive to the economic cycles in the overall economy. This was the case because sales of clothing often plummeted during economic downturns. Furthermore, the fact that the garment industry was such a labour-intensive industry also contributed to its instability (Frager, 1992:30). All of these factors placed the manufacturer under great pressure and it left the worker vulnerable to exploitation.

In order to develop some countervailing power against such practices, the Jewish workers decided to form unions to address their concerns. During the early part of the 20th century, Toronto garment workers fought against poor working conditions, job insecurity, low wages and very long hours, and it was the union movement that played a vital and important role in these struggles. At one point craft-based unions represented custom tailors during the 19th century; however, with the rise of the factory system, as well as mass marketing and ready-to-wear clothing, factory workers felt that they needed their own unions (Taylor, 2003:12).

With this goal in mind, the men’s clothing workers decided that they wanted to be represented by the Amalgamated Clothing Worker’s Union (ACWU), in 1914; and the women workers were represented by the International Ladies Garment Workers’ Union (ILGWU) starting in 1911. These unions were divided into locals based upon the ethnicity of their members as well as on the type of work they performed.
While it is true that an urge for social reform was a big part of the union’s appeal to the workers, there was an equally compelling reason why the union movement appealed to these same workers. The union movement was needed, so it was argued, to not only provide better working conditions, but also to provide industrial stability so that the clothing industry could continue to survive and then thrive in the coming years (Taylor, 2003:12; Frager, 1992:26).

Yet there appears to be some confusion and ambiguity even within the minds of some individual scholars over the issue of just how much real industrial stability was achieved. One of the causes that helped to fuel this instability even more was the highly competitive nature of this business. In Toronto, the two aforementioned unions, the ACWU and the ILGWU, attempted to convince employers to work with them to achieve some measure of stabilization through the elimination of low-wage competition.

However, it appears that the attitudes of the manufacturers to these measures were ambivalent to say the least. On the one hand manufacturers would benefit from a better industrial climate if the amount of cut-throat competition were greatly reduced; on the other hand, each manufacturer desired to out-compete the other by keeping their costs of production as low as possible. Each manufacturer wanted to be able to search for the contractor that would charge the lowest price, and they resented the unions’ attempts to regulate the contracting process. When the unions could not resolve this matter through negotiations, they resorted to strikes, and strike threats, as a way of obtaining cooperation from the manufacturers over this issue.

Therefore, some scholars conclude that, in Toronto, union-management cooperation was to a large measure a forced kind of cooperation. And although the unions were able
to achieve some real gains, it is argued that real stability was not achieved within this
industry because cut-throat competition continued to exert pressure on wages and
working conditions in the clothing industry. And even though the employers and the
unions did manage to negotiate some agreements, in some cases, overall the war
continued (Frager, 1992:33).

In the end, however, whether or not real stability was achieved, or whether or not this
stability was a matter of forced cooperation, it is not historically inaccurate to claim that
at least a measure of stability was achieved during the interwar years. It was this measure
of stability which helped to create the foundation for the garment industry to thrive in the
post-World War II years to come.

Once World War II was over, many Jewish organizations in Ontario came forward
with a plan to try and rescue and resettle the many thousands of European Jews who had
survived the Nazi persecution. Of all the organizations involved, it was the needle trades
that achieved the greatest success in convincing the Canadian government to allow such a
large number of immigrants to come to Canada. They achieved this success by arguing
that there was much work which needed to be done within the garment industry.
Therefore, the first new group of workers who were allowed to work in the garment
industry after the war were, once again, the Jewish workers. Although this vast number of
Jewish workers came to work in the needle trades, the fact of the matter is that the mass
murder of European Jews meant that the earlier flood of Jewish immigrants to Canada
would never be repeated (Frager, 1992:216).

This trend lasted into the late 1950s, and then the Jewish community began to move to
the northern suburbs of Toronto and no longer supplied the majority of the garment
industry workforce. During the 1960s, new groups of European immigrants such as the Italians, the Portuguese, and the Greeks entered the country and sought work in the garment industry. More recently, the industry has relied on East Indian, Filipino and Chinese immigrants to fill these positions (Taylor, 2003:18).

This new influx of Jewish workers, along with the new ethnic groups that came into the industry after the war, helped to enrich this industry and make it not only survive but thrive as a viable and profitable industry. During the post-war economic boom, the garment industry allowed immigrants the opportunity to earn a respectable living (Taylor, 2003:18).

A measure of stability within this industry lasted until 1979 when the Tokyo Round of trade liberalization negotiations of the General Agreement on Tariffs and Trade (GATT) caused this measure of stability to unravel. The real trouble for the garment industry actually started in 1980, well before the signing of the Canada United States Free Trade Agreement (CUFTA), once tariffs on garments and textiles were reduced during these GATT negotiations (City of Toronto, 1984). It was also during this time that imports began to take an increasing market share from domestic garment manufacturers. With the advent of increased import penetration, as well as the further removal of tariffs, it was not long before concerns about industrial restructuring began to surface.

In June 1981, the federal government indicated that it had developed a new national policy for the clothing and textile sectors. Along with the announcement of its new policy, it had also created a new agency, the Canadian Industrial Renewal Board (CIRB). This Board had a significant budget of $250 million, and it used this money to provide
restructuring assistance to the smaller clothing and textile places within the country that hitherto had never received any such assistance.

The CIRB also had policy instruments at its disposal, and these policy instruments were used to find solutions to some of the problems caused by this industrial restructuring (Mahon, 1984:129). In specific terms, CIRB’s mandate was to try and diversify economic activity in regions which were very dependent on clothing and textiles, while, at the same time, also trying to assist workers in this industry to cope with the subsequent changes that industrial restructuring would produce. CIRB’s mandate was rather short-lived, as it ceased operations in March 1986 (Atkinson and Coleman, 1989:169).

However, critics of these developments argued that this new national policy only complemented earlier initiatives, and as such, it did not form the basis of any real industrial strategy that rejected continental rationalization while, at the same time, embracing an alternative arrangement (Mahon, 1984:129-30).

All of this thinking really became a moot point when the Canadian government embraced the new era of free trade with the United States. Once this occurred, the policy of free trade really became the de facto industrial strategy of the federal government, even as it made it much more difficult to practice older forms of industrial policy. And while the GATT agreement initially destroyed the measure of stability that existed within the garment industry, it was trade liberalization agreements such as the Canada United States Free Trade Agreement (CUFTA) and the North American Free Trade Agreement (NAFTA) that created further problems for the garment industry as a whole.
CUFTA, NAFTA AND THE PROBLEMS OF TRADE LIBERALIZATION

When Ronald Reagan was President of the United States in the 1980s his and previous U.S. economic policies generated a massive trade deficit in the US, while producing trade surpluses with its major trading partners such as Canada. As a result of these developments protectionist pressure grew within the United States since Americans were tempted to blame their growing trade deficit on the alleged unfair trading practices of the other nations, including Canada. Whether it was regional development policies, or special unemployment insurance payments to seasonally employed fisherman in the Atlantic Provinces, or lower stumpage fee charges on lumber in the province of British Columbia, all of these things were cited by the Americans as unfair trading practices on the part of the Canadian government (Watkins, 2006:123).

The United States responded to these perceived unfair trading practices by imposing countervailing tariffs and anti-dumping duties, in specific cases, on traded goods from Canada. This created problems for the Canadian economy since these actions on the part of the U.S. caused Canada to suffer a loss of both jobs and exports. Moreover, officials in the Canadian government feared that the United States would enact even more protectionist measures across-the-board (Doern and Tomlin, 1991).

Therefore, the Canadian government decided that it was imperative that it try and negotiate a deal with the U.S. that would somehow preclude Canada from becoming the victim of more U.S. protectionism and that also would earn greater access to the U.S. market through more competitive Canadian firms. This strategy was based upon the view that U.S. protectionism was a very serious threat to the Canadian economy, and as such, it required a serious response on the part of the Canadian government. Given the fact that
the Canadian economy is so heavily export oriented, and that 80 per cent of Canadian exports go to the U.S., Canada’s vulnerability on the export front was very apparent. This vulnerability also extended to Canadian apparel and textiles since 80 per cent of what is made in Canada is also exported to the United States.

In October 1987, the United States and Canadian governments announced that they had negotiated a bilateral free trade agreement. Both President Ronald Reagan and Prime Minister Brian Mulroney signed the deal on January 2, 1988. Once the United States Congress and the Canadian Parliament approved the legislation, the deal came into effect on January 1, 1989 (Watkins, 2006:122).

This trade deal covered a plethora of issues, and it went well beyond what was usually involved in creating a free trade area of this type (Doern and Tomlin, 1991). First and foremost, however, most tariffs between the two countries were to disappear completely, and in some sectors, would be phased out more gradually over a ten-year period. By and large, however, under CUFTA the process of tariff removal would be accelerated. Canada, which had more tariffs than the United States, faced the larger adjustment (Watkins, 2006:122). These adjustments would have further implications for the garment industry once the tariff wall was removed.

Once CUFTA had successfully been negotiated and signed into law, this treaty set the stage for another free trade agreement that would have even more powerful implications for Canadian industry. The North American Free Trade Agreement (NAFTA) with Mexico as an added key signatory country came into effect in 1994, and in many ways it completed the work that had begun under CUFTA, but also extended it as well (Cameron and Tomlin, 2000).
It is critically important to remember that trade agreements such as (CUFTA), along with its counterpart (NAFTA), were created to bring about the further integration of the Canadian economy with that of the United States in the first instance and integration into the entire North American economy in the second instance with the addition of Mexico as the third country in this treaty. The goal was to design a trade bloc that could compete with, but also rival, the trade blocs that were being developed in Europe and Asia. In order to accomplish this goal, as has been previously stated, tariff and non-tariff barriers to the free movement of capital, goods and services were removed. This had a deleterious effect on some industries and positive effects on others. The garment/textile industry was one such industry that was deeply and adversely affected by the enactment of these treaties.

Furthermore, even though the negative consequences from these trade deals were being felt throughout the garment industry, it was also becoming increasingly obvious to people within the garment industry that this sector was facing two long-term structural problems. The first problem was the increasing number of imports from low wage countries that were coming into the Canadian market. The second major challenge was how the garment industry was going to deal with the introduction of new and advanced technology into the workplace. Before the 1980s, it was the more capital-intensive textile industry that had to deal with such problems. Nevertheless, as the years progressed the apparel industry had to face the fact that sooner or later computerized cutting, pattern-making and material handling were being introduced into garment manufacturing.

While the introduction of this new technology was welcomed by some, it was also viewed by others within the industry as a threat to their livelihoods. The reasons for such
a negative response were not hard to discern. First, it very often leads to a loss of employment. Second, it requires substantial capital expenditures, as well as periods of adjustment, while the equipment is installed and the workers are trained to use it. A final factor that placed Canadian manufacturers at a distinct disadvantage was the fact that firms in low-wage countries had already installed these computerized manufacturing systems in their factories, thus further compromising Canada’s ability to compete in the market (City of Toronto, 1984:2).

The City of Toronto was aware of these problems, and they were in a position to try and do something to ameliorate this situation. During the 1980s, the City had begun to hire so-called sector development officers so that the City could focus its attention on certain key sectors of the economy that it had identified as critical for future economic development. One of these sectors was the garment/fashion sector.

**The Creation of the Garment Industry Liaison Committee**

The City was so concerned about the aforementioned situation that at its meeting on December 19, 1983, City Council asked the Commissioner of Planning and Development to investigate the possibility of establishing a Garment Industry Liaison Committee. Preliminary research by the City established the fact that such a committee would be welcomed by all of the relevant stakeholders in the garment and related apparel industry. This Committee would provide a forum for discussion between labour, management, government and academics that were interested in such issues and research.

The Committee’s goal would be to focus primarily on issues pertaining to Toronto-based garment firms and workers. However, other aims and objectives were also important to the Committee and they included the following:
• To assist in improving the public image of the City’s garment industry;
• To encourage and promote Toronto as a location for major trade fairs and garment industry exhibitions;
• To improve linkages between educational institutions and the industry in order to facilitate worker training and technological upgrading;
• To advise City Council on issues directly related to the garment industry and its workers in Toronto.

Once this Committee was formed, it would need to have a proper budget and staff support from the City equivalent to that provided to existing Industrial Coordinating Committees (City of Toronto, 1984:3).

When City Council convened on October 29, 1984, it adopted a report regarding the establishment of a Garment Industry Liaison Committee. The first meeting of the Garment Industry Liaison Committee (GILC) took place on December 4, 1984 (City of Toronto, Minutes of Proceedings, 1985:8723). Once this committee was formed it met once a month to discuss various issues and initiatives. It was a dynamic committee. It established various subcommittees on particular issues of importance to the garment industry, such as the establishment of further hydro services in the garment district; the development of a Fashion Trade Mart; the development of a possible fashion design incubator; and finally, it established one final subcommittee to discuss the creation of the City of Toronto Awards for Excellence in Fashion Design. Each of these subcommittees held regular meetings. All of these initiatives were intended to promote the number one priority of this Committee which was the retention and promotion of Toronto’s garment industry (City of Toronto, Minutes of Proceedings, 1985:8724).

The garment industry reacted very positively to all of these developments, and they indicated that they welcomed City Council’s desire to strengthen and retain the industry in Toronto.
Given the positive influence that GILC had exerted upon the garment industry in a very short time period, it came as no surprise that after the first six months had elapsed GILC Committee members wanted to secure a commitment from City Council that this Committee would be made permanent. They also wanted to change the name of the Committee to the Fashion Industry Liaison Committee. The reason why the GILC Committee members wanted their committee name changed was to counteract the negative perception the public had about the garment industry. The *Final Report On Image Development For The Toronto Fashion Industry* made twenty recommendations in an attempt to respond to concerns that “there was a widening discrepancy between the somewhat negative public perception of the Toronto Fashion Industry as compared to the reality of a dynamic industry growing steadily, but not without problems” (*Final Report On Image Development, 1985:1*). The first specific recommendation on general image stated the following: “It is important that this temporary mandated committee continue to exist. It should change its name from the Garment Industry Liaison Committee to the Fashion Industry Liaison Committee” (*Final Report On Image Development, 1985:4*).

Toronto City Council was amenable to the above request for these changes. And there was no opposition on the part of City Councillors to having the name changed, since the Economic Development Committee had already approved the initial recommendation for the name change. Therefore, at a City Council meeting on July 15, 1985, the Garment Industry Liaison Committee was granted its name change to the Fashion Industry Liaison Committee and the new Committee was made permanent (City of Toronto, Minutes of Proceedings, 1985:8726).
It is also important to note that the creation of GILC and FILC Committees was funded entirely from the financial resources of the City of Toronto. The federal or provincial governments did not provide any money to establish or develop these Committees (City of Toronto, Confidential Memo, July 5, 2010).

Once FILC was officially formed and sanctioned by City Council the members of this Committee continued to work on the major initiatives that GILC had developed. However, by 1996 it was very apparent that the garment industry was facing a looming skills shortage which could affect the ability of the industry to compete in the global economy. Therefore in 1996, FILC, along with a group of Toronto’s apparel industry stakeholders, created a new organization called The Fashion Industry Human Resources Adjustment Committee (FIHRAC).

Once FIHRAC was created it became a sub-committee of the Fashion Industry Liaison Committee (FILC) and its mandate was to spearhead training and skills development initiatives for the garment industry. The people who participated in FIHRAC received skills training that was directly relevant to their jobs within the garment industry. Courses such as sewing machine operation, sample making and English as a Second Language (ESL) were frequently offered.

It was not long, however, before the program that FIHRAC offered started experiencing some difficulties. Unfortunately, neither the City of Toronto, through FILC, nor its newly created sub-committee FIHRAC had the capacity, mandate or resources to address the technology and workforce needs of the garment industry. Furthermore, they were incapable of providing the on-going leadership that was needed in a cost effective and sustainable manner.
As a result of these difficulties the work of FIHRAC was finally discontinued in 2003. A new organization called the Apparel Industry Development Council was created in February 2003. This organization had a similar mandate to that of FIHRAC and its workings will be analyzed in chapter six (City of Toronto, Economic Development, Confidential Letter, January 5, 2010).

**BASIC CURRENT INDUSTRY STRUCTURE**

The evolving Canadian fashion/garment/apparel industry needs to be defined more clearly and its structure set out in its current configuration. This industry produces women’s, men’s and children’s wear, as well as foundation garments and a wide range of knitted apparel that encompasses T-shirts, underwear, sweaters and hosiery.

However, a further layer of complexity is added to all of the above by the fact that designers of clothes need to be included in this descriptive account for two specific reasons. First, as the name indicates, the garment industry today is composed of two separate, but highly interwoven, elements: the fashion designer and the manufacturer of the fashion design. Second, given the fact that the fashion/apparel sector is composed of many small and medium sized firms, designers are also very often known as designer/manufacturers.

But even though fashion designers play an absolutely critical role in the overall success of the apparel sector, the reality is that the fashion design part of this equation, along with design in general, has been a woefully neglected part of Canadian economic and cultural policy by all levels of government. Despite the fact that clear evidence exists which indicates that design is a critical component for a country’s innovative success, other countries are clearly outperforming Canada on this issue. The Nordic countries in
general are recognized as global leaders in the development of design thinking. Similarly, Denmark, Norway and Sweden all have developed national design policies that are designed to achieve certain clear policy objectives (Vinodrai, 2009:7-10).

Because there has been such a lack of strong national support for design-related activity, any policies that do exist are the results of efforts on the part of provincial and local policy initiatives. Limiting the discussion to the area of fashion design alone will yield an important insight. Several years ago there was a Private Member’s Bill introduced in the Ontario legislature that would have seen fashion design subsumed under the umbrella of the Ministry of Culture. Unfortunately, the bill died on the Order Paper for that particular legislative session. More recently, however, two other Members of the Provincial Parliament (MPPs) Ms. Christine Elliot and Ms. Cheri Di Novo re-introduced this Bill into the Ontario legislature on March 31, 2010. If the Bill is passed, it will subsume the fashion design part of the fashion/apparel industry into the Ministry of Culture, thus allowing designers to apply for cultural grants in the form of money which will help them with their work in designing their fashions (Government of Ontario, Hansard, Wednesday March 31st, 2010).

If the passing of this legislation were to be successful, it would certainly be a welcome development; however, it is still no substitute for a proper national design policy similar to the ones that have already been developed in Norway and Sweden. A national design policy could do a lot to help ameliorate some of the problems within the fashion sector.

The fashion sector in Ontario also needs to be placed within the context of the overall Canadian scene. As the historical development of this sector clearly indicates, the fashion sector has faced many challenges, and achieved a number of successes, in its one hundred
year history. However, the most recent and most important overall Canadian data on this industry is summarized in Table 4.1 below.

Table 4.1  Canadian Apparel Facts and Figures 2007

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Revenues</td>
<td>$4.2 (billions)</td>
</tr>
<tr>
<td>Annual Exports</td>
<td>$2,207,722 (billions)</td>
</tr>
<tr>
<td>Annual Imports</td>
<td>$3,386,238 (billions)</td>
</tr>
<tr>
<td>Annual Trade Deficit</td>
<td>- $1,178,516 (billions)</td>
</tr>
<tr>
<td>Direct Contribution to GDP</td>
<td>1.4 %</td>
</tr>
<tr>
<td>Employees: Production</td>
<td>31,608</td>
</tr>
<tr>
<td>Administration</td>
<td>9,300</td>
</tr>
<tr>
<td>Total Salaries and Wages:</td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>$759.9 (million)</td>
</tr>
<tr>
<td>Administration</td>
<td>$452.3 (million)</td>
</tr>
<tr>
<td>Average Annual Salary:</td>
<td></td>
</tr>
<tr>
<td>Production</td>
<td>$24,041</td>
</tr>
<tr>
<td>Administration</td>
<td>$48,636</td>
</tr>
<tr>
<td>Annual Capital Investment in Machinery and Equipment</td>
<td>$ 28.8 (million)</td>
</tr>
</tbody>
</table>


The Canadian fashion/apparel industry is the 19th largest manufacturing sector in Canada. The total number of employees in the garment industry decreased from a high of 86,954 workers in 1998, to just 40,908 workers by 2007. An equally important development was the fact that production employment in the garment industry decreased from a high of 74,170 workers, in 1998, to a low of 31,608 workers in 2007, a decrease of 8.2 per cent per year on average, and a decrease of 18.2 per cent in the last year.

Today, 9300 people work in administration in this sector ([http://www.ic.gc.ca/cis-sic.nsf/IDE/cis-sic315empe.html](http://www.ic.gc.ca/cis-sic.nsf/IDE/cis-sic315empe.html)). In the City of Toronto itself there are 4,905 people
who are listed as working in the clothing manufacturing sector (City of Toronto
Employment Survey 2009).

By way of comparison, total employment in the manufacturing sector as a whole
showed a decrease of just 0.8 per cent per year from 1998 to 2007, and a decrease of 2.6
per cent between 2006 and 2007 ((http://www.ic.gc.ca/cis-sic.nsf/IDE/cis-
sic315empe.html). The clothing industry accounts for 3.3 per cent of all the
manufacturing employment in this country, and it makes a direct contribution to GDP
that is equal to 1.4 per cent (Industry Canada, 2008:2).

While it is true that Canada has a number of large apparel manufacturing firms, the
reality is that small firms predominate throughout this industry. Approximately three-
quarters, of these firms have less than 50 employees. These firms account for one-third of
all industry shipments (Canadian Apparel Federation, 2003:8). Apparel is manufactured
in all of the provinces, and territories. All of these manufacturing establishments make
important contributions to the local economy in all of the regions of Canada. For
example, apparel manufacturing is a major economic contributor to large urban
economies such as Montreal. Toronto, Winnipeg and Vancouver, but it is also an
economic contributor to such regions as the Beauce in the province of Quebec (Canadian
Apparel Federation, 2003:13).

This type of economic contribution can be very important for the smaller communities
in Ontario as well. In rural cities and small town areas, apparel manufacturers, as well as
textile manufacturers, can be the only source of manufacturing employment, and,
therefore, an important source of revenue for any local government. Should this type of
manufacturing operation close, alternative sources of employment may not exist.
Moreover, the apparel industry also draws on a wide range of skills, including low skill and low technology employment that is suitable for some new entrants into the Canadian labour market. Since the apparel industry tends to be concentrated in the urban areas, these entry-level jobs play an important socio-economic role in helping to socialize new entrants into the Canadian work force. After all, new immigrant workers represent more than 40 per cent of the apparel industry’s work force.

The apparel industry also provides employment for women. Women account for 94 per cent of sewing machine operators, 89 per cent of sewers/cutters, and 75 per cent of other production jobs (Canadian Apparel Federation, 2003:13). Many of these workers have rather low levels of formal education: for example, 57 per cent of the employees in apparel manufacturing did not have a high school diploma, compared with 29 per cent of the overall work force (Canadian Apparel Federation, 2003:13). Any further erosion of apparel manufacturing employment will deprive Canadians of an important source of employment that today pays good wages and benefits as well as providing on-the-job-training. More importantly, it is unlikely that these same workers will ever find comparable work that provides them with the same degree of wages and benefits given the level of education they have attained. Yet a look at the statistics seems to indicate that this is precisely what is happening in the apparel industry. A look at some key variables in Table 4.1 begins to reveal a picture of an industry that is currently facing some serious challenges.

The first variable that is important to look at is the annual manufacturing revenue from shipments. Annual revenue for this sector decreased from a high of $7.0 billion in 1998 to a low of 4.2 billion in 2007. Between 2006 and 2007, manufacturing revenues
decreased by 15.3 per cent. Revenues for the manufacturing sector as a whole, however, actually increased by 3.1 per cent, and they have remained virtually unchanged with growth of 0.0 per cent in the most recent year (www.ic.gc.ca).

The measure of manufacturing value-added was also in decline. It decreased from $3.6 billion in 1998 to $2.0 billion by 2007. This represented a decrease of 5.5 per cent per year, but between 2006 and 2007 value-added decreased by 13.8 per cent (www.ic.gc.ca). If this trend continues this could have serious implications for clothing manufacturing in Canada, and Ontario, since the future of any manufacturing in Canada will no longer be found in simple mass production but in value-added production.

This decline in value-added production is also reflected in the decrease in annual capital investment by manufacturing firms. Investment in machinery and equipment decreased from $138.0 million in 1998 to $28.8 million in 2007. This represents a compound annual rate (CAGR) of –14.5 per cent. And over the course of the most recent year the figure is even worse: investment in machinery and equipment declined by –24.4 per cent (www.ic.gc.ca/eic/site/apparel-vetements.nsf/eng/ap03288.html). Once again this does not bode well for the future of apparel manufacturing here in Ontario, or Canada, since investment in machinery and equipment is tied to increased productivity, and increased productivity is also related to innovation in new products and processes within the overall economy.

Given the fact that there has been such a decrease in employment, in annual manufacturing revenue and in value-added manufacturing, it is not surprising to see that wage levels in the fashion/apparel sector are more modest. This stands in sharp contrast to the wage levels paid to the workforce in the aerospace sector. Total salaries and wages
paid out to aircraft workers amounted to over $3.5 billion in 2009. The average gross salary was $62,000 per worker. In stark contrast to these figures, the total salaries and wages paid out to garment workers amounted to over $1.2 billion in 2007, and the average gross salary was a little over $24,000 for a production worker and over $48,000 for an administrative worker in this sector (http://www.ic.gc.ca/cis-sic.nsf/IDE/cis-sic315sale.html).

A final variable that needs to be examined is Canada’s apparel trade performance. While it is true that historically Canada’s apparel trade has always been in deficit, this does not take away from the fact that Canada’s apparel trade has been worsening since 2002. This trade deficit has doubled within the last five years.

Thus the reality is that Canada’s apparel exports are in serious decline. However, in the earlier period of 1994 to 2000, apparel exports registered strong growth so much so that annual percentage changes were as high as 25.1 per cent. But after 2000, with the exception of 2001 and 2002, exports have been falling with annual percentages changes becoming negative and then becoming worse as the years progressed (www.ic.gc.ca/eic/site/apparel-vetements.nsf/eng/ap03288.html).

Even though there are probably a multiplicity of factors that can account for these wide-ranging disparities within these industries, and sectors, such as the amount of R&D that takes place, or the level of productivity that exists within each industry, nevertheless, these figures give one a reason to pause and reflect on the root causes of why the garment industry is facing such daunting challenges at the beginning of the 21st century.

Upon further examination several key factors emerge around the entire issue of the liberalization of global trade. These issues go well beyond the mere implementation of
CUFTA and NAFTA, and they have acute consequences for the apparel/fashion sector in Canada, and by extension, the province of Ontario and the City of Toronto.

Over the years, the Canadian apparel industry has tried to position itself so that it would be considered a global player. For example, Canadian firms are already producing offshore and they have seized upon preferential access to the United States market to export their products. However, until very recently, the Canadian apparel industry has also operated under protectionism, and it was this protectionism that allowed the Canadian industry to thrive within North America.

Today, this protectionism is now gone, and with that change Canadian apparel firms now have to compete with imports from low wage countries. A series of major trade liberalization initiatives have already produced profound consequences for the Canadian apparel industry. The most important initiatives include the following:

- The removal of import quotas in compliance with the World Trade Organization Agreement on Textiles and Clothing. This agreement commenced in 1995 and it was fully implemented by January 1, 2005. The agreement opens up the apparel, and textile, Canada and United States previously protected markets, to low wage imports.

- Concessions to the Least Developed Countries (LDC) initiative which allowed for duty and quota free imports for apparel and textiles produced in 48 countries, including Bangladesh, Cambodia, Laos and Haiti. This took effect on January 1, 2003, with a further elimination of more quotas and tariffs taking place in 2005 (Industry Canada, 2008:4; Canadian Apparel Federation, 2003:14).

These initiatives have led to a further set of problems. First, low-cost imports encourage Canadian producers to place their production offshore as well as to increase their sourcing from non-Canadian suppliers. Second, the end of quotas in 2005 enabled China and other low-cost countries to make significant gains into the United States market, while Canadian exporters had to compensate for the impact of the rise in the
Canadian dollar on the competitiveness of their goods. Third, retailers have also tried to create advantages for themselves now that protectionism is gone. As retailers become even larger, and more globally connected, they continue to build global brands which they market around the world. In so doing, however, they eliminate many Canadian apparel firms from their supply chains. This practice contributes to overall job loss, and market decline, within the industry (Industry Canada, 2008:2; Canadian Apparel Federation, 2003:14).

For Canadian consumers, all of this is supposed to be wonderful news, since increased imports will result in greater choice and lower cost for the product that is purchased. However, the positive implications for the Canadian apparel/fashion sector are far less certain. Even the industry professionals are extremely divided in their opinions on the important matter of the final outcome of these trade liberalization initiatives.

On the one hand, many industry observers think that Canada is in a very good position to take advantage of a quota free post-2004 world. They think that any increase in imports will be modest, and that, overall, the removal of tariffs and quotas will not significantly impact Canadian manufacturers. On the other hand, there is also a large group of industry professionals who are extremely concerned that the removal of import restrictions will for all intents and purposes signal the end of apparel manufacturing in Canada. According to Canadian Apparel Magazine, during the first four months of 2003 imports from LCDs increased by more than 66 per cent over the previous year. In specific terms, imports from China, rather than going to other LCDs, have risen by 20 per cent as they penetrate the Canadian and US market. Moreover, the magazine claims that offshore
production is also on the rise as more and more domestic manufacturers close local 
operations (Hill and Knowlton, 2003:5).

Other issues also have an impact on the apparel/fashion sector. The rising Canadian 
dollar continues to have an impact on the industry; additional issues include the high 
duties paid on imported fabrics, access to skilled workers and the challenge to remain 
innovative. When all of these issues are combined, there is a growing perception that 
apparel manufacturing is a waning industry (Hill and Knowlton, 2003:5).

Indeed, this growing perception that apparel manufacturing is a waning industry is 
buttressed by other evidence as well. The fact of the matter is that relatively few 
Canadian suppliers have what could be termed truly world-class product development 
and manufacturing capabilities. When they do exist, however, these product development 
and manufacturing capabilities then need to be further combined with superior marketing 
and sales, as well as with efficient distribution facilities and financial resources, if 
Canadian suppliers are to have any chance of competing globally.

These are the main ingredients that are essential for Canadian suppliers to possess in 
world markets. This is the case because if the apparel sector is to have a future in Canada, 
the industry will have to become an industry that is based on design, creativity, 
technological innovation, marketing and distribution capabilities, rather than, as in the 
past, an industry that was based solely on manufacturing productivity. Firms that are 
successful even today are starting to compete on this basis. But the apparel/fashion sector 
cannot accomplish this by itself: government policies and programs must support this 
vision (Canadian Apparel Federation, 2003:5). This issue will be addressed further in 
Chapter 6 which deals with the fashion cluster case study.
But as important as the apparel/fashion sector has been to Canada’s, and Ontario’s, and Toronto’s economic well being in the past, the fact of the matter is that the world of today is a very different place from the world that existed at the start of the 20th century. The garment industry is really a product of the old style economy based upon the factory system and mass production of a standardized product, especially after ready-to-wear was developed as an alternative to tailor made clothing. However, out of the ashes of the old economy, as Chapter 3 has shown for aerospace, a new techno-economic paradigm has emerged. Again, drivers of this new techno-paradigm are the microprocessor, the computer and various other digital technologies that have revolutionized the entire world. These technologies in combination with trade liberalization have helped to create the era of economic globalization, but in the garment/fashion sector it has also elevated the importance of design and of fashion as a product value.

To a very large degree, this era of economic globalization is fuelled by the increasing importance of knowledge, innovation and design for the production of new products and services in the economy. Instead of the old factors of production, which consisted of land, labour and capital, knowledge is now the new currency for those countries that seek prosperity in the 21st century.

All of the above is vitally important to our discussion of the fashion sector because the Canadian fashion industry grew from its earliest beginnings, at the start of the 20th century, and matured into the important economic player of the Canadian economy that it has become during the time that the Fordist system of mass production was dominant. Indeed, this can be seen as being even more the case when the historical development of the fashion sector is viewed in relation to the historical development of the aerospace
sector. On the one hand, from its very beginnings the aerospace sector owed a great deal of its success to state-led factors that propelled its development and fostered its growth. Government policy instruments such as public procurement and direct ownership helped to fuel this success over the long term.

On the other hand, the genesis and success of the fashion sector can be attributed to a very different dynamic. It was market-led development, along with entrepreneurial creativity, that ultimately led to the overall success of the garment/fashion industry. Unions also played a role in that they were responsible for helping to usher in a measure of stability which allowed this industry to survive and then thrive as the years progressed. Any so-called state-led initiatives such as the creation of GILC, and later its successor FILC, on the part of the City of Toronto came rather late in the development of the fashion sector, and as such, it is probably still too early to fully assess their overall effectiveness.

However, now that things have changed within the Canadian economy an important public policy question that must be answered is this: How will the apparel/fashion sector continue to survive and thrive in this new model of the knowledge-based economy, an economy in which the national system of innovation, as well as the regional system of cluster-related innovation, now occupy a place of importance in future economic development in Toronto, Ontario and Canada more broadly?

As has been previously stated, this is an important question to ask because the fact of the matter is that no two countries possess the same mix of innovative resources within their innovation systems. An equally important concern within each type of innovation system is the degree of connectedness that exists between the various components of the
system. For example, how easily do knowledge flows, scientific discoveries and other highly skilled and important resources flow across the system? Are there certain conditions that are endemic to the fashion industry itself that might prevent any of this from taking place? By examining the empirical evidence in the fashion cluster in Chapter 6, some answers to these important questions begin to emerge but new ones also arise.

CONCLUSIONS

This chapter has delineated the historical development of the Garment/ Fashion sector in Toronto, in the larger provincial and Canadian context. It has done so by looking first at the context and history of that development, and second, it has looked at how trade liberalization agreements and related factors have affected the development of the garment industry. It also briefly profiled in a third section the current basic structure of the industry. Several basic conclusions have emerged.

First, the unique historical experience that sets this industry apart is that its birth to a great and substantial degree was almost entirely a result of the work of the Jewish community in Toronto. Furthermore, a very good argument can be made that if it were not for the influx of Jewish workers into this industry, Toronto may not have developed the fashion sector that is still in existence today.

However, the genesis and development of this industry in Toronto was not an easy task. The garment industry was unstable by its very nature, and this instability placed manufacturing under great pressure and it left the worker vulnerable to exploitation. In order to develop some countervailing power against such practices, the Jewish workers decided to form unions to address their concerns. The union movement was needed to
provide, among other things, a measure of industrial stability so that the clothing industry could continue to survive and then thrive in the years ahead.

To a large extent a measure of stability was achieved by the unions which helped to create the foundation for the garment industry to thrive after World War II. This measure of stability within this industry lasted until 1979 when the Tokyo Round of the GATT negotiations caused this stability to unravel. After GATT, other trade liberalization agreements such as the Canada United States Free Trade Agreement (CUFTA) and the North American Free Trade Agreement (NAFTA) created further problems for the garment industry as a whole.

However as damaging as these trade agreements were to Canada’s garment industry, there were other trade liberalization agreements that were equally damaging to our apparel/fashion sector. The two most important initiatives to date were the removal of import quotas in compliance with the World Trade Organization Agreement on Textiles and Clothing in January 2005, and the Concessions to the Least Developed Countries (LDC) initiative which allowed for duty free and quota free imports for apparel and textiles from 48 countries into Canada. This took effect on January 1, 2003 and a further round of tariff and quota cuts took place in 2005.

As a result of these measures, there is now a whole group of industry professionals who are extremely concerned that the removal of import restrictions will signal the end of apparel manufacturing in Canada. The statistics that have been cited within this chapter seem to strongly support their claims. When this is coupled with the fact that relatively few Canadian suppliers have what could be termed truly world-class product
development and manufacturing capabilities, there is much cause for concern that apparel manufacturing is a waning industry in the province of Ontario and in Canada.

All of the above problems only further serve to illustrate the fact that if the apparel sector is to have a future in Toronto, in Ontario, and in Canada, it will have to become an industry that is based on design, creativity and technological innovation rather than, as in the past, an industry that was based solely on manufacturing productivity. But the apparel/fashion sector cannot accomplish this by itself: government policies and programs must support this vision, but it remains an open question for the analysis in Chapter 6 of the fashion cluster as to whether cluster-related innovation policy is working or is enough.
Chapter 5
CASE STUDY OF THE TORONTO AEROSPACE CLUSTER

INTRODUCTION

The purpose of this chapter is to develop a focused empirical analysis of our first case study, the Toronto aerospace cluster. This chapter analyzes the aerospace case study by looking at the three analytical framework variables of leadership, local government finance and multi-level governance programs and activities. The focal point of this analysis is on how cluster-related innovation policy has emerged and changed during the period being examined. Table 5.1 below serves as an initial guide to key aspects of the analytical story.

LEADERSHIP

When the word leadership is used the question becomes whose leadership are we talking about? When the interviewees were asked how important leadership was in all of its forms, political, civic and entrepreneurial, for the development of an innovation policy and cluster policy, two things became apparent. First, all interviewees agreed that leadership is one of the most important variables that must exist if a cluster-related innovation policy is to have any chance of being successful in achieving its desired objectives.

Some of the people who were interviewed thought that leadership is tremendously important because the success that one sees is directly related to the person who is leading the initiative. To lead with passion and belief in the cause is seen as being
Table 5.1 Key Variable Findings for the Aerospace Cluster

Leadership

- Toronto City Council
  - Lead role in developing: 1) *Toronto Economic Development Strategy* and 2) *Flight Path*
- Mayor
  - Lead role in developing *Agenda for Prosperity*
- City Bureaucracy
  - Lead role in formulating the detailed components of the *Toronto Economic Development Strategy*
- Political leadership
  - Political leadership critical to success of cluster-related innovation policy development
- Entrepreneurial leadership
  - Entrepreneurial leadership is important but not as important as political leadership in cluster-related innovation policy development
- Civic leadership
  - Little or no civic leadership within aerospace sector

Local Government Finance

- City Operating Budget Increases
  - 1998-2004: $1 billion
  - 2004-2006: $1 billion
  - 2004-2008: $1.6 billion
  - Total increase for decade: $2.6 billion
- Economic Development Budget Increases
  - 1998-2004: $359,000
  - 2004-2006: $225,000
  - 2006-2008: $1,637,000
  - Total increase for decade: $2,213,900
- Annual Budget for cluster ($15,000)

Multi-level Governance Programs and Activities

- Federal Programs
  - Three direct programs (CISP, TPC, SADI)
  - Four indirect programs (IRAP, IRB, SR&ED, EDC)
- Provincial Programs
  - Two direct programs (AMIS, NGOJF)
important. If one can find a leader who will drive a sector like that, then success is much more likely.

Political leadership is especially seen to be critical to the overall success of a cluster-related innovation policy and cluster development within the city. Political leadership is critical for two reasons. First, one needs to develop engagement and ties with the local government; and second, one needs to drive that engagement up to the level of the federal and provincial governments as well as outwards to businesses, universities and community colleges. If one does not have the appropriate level of leadership, one does not get the full resources of local government on board. And if one does not have the local government on board, one cannot mobilize, as an example, the federal government because one does not have enough MPs to drive and communicate local concerns to the federal government. For example, while the city can be proud of its role in the creation of the Flight Path document, some people who were interviewed wondered if the creation of this document ever got communicated back to the appropriate people within the federal government (Interviews 3, 7, 11, 13).

Moreover, even though the emphasis is being placed on local leadership for this thesis, many of the people who were interviewed stressed how critical it was to have the political leadership and support of all three levels of government in the development of a cluster-related innovation policy. Without the support of all three levels of government in the development of a cluster policy, the cluster as a networked and partner-based system would not exist.

For example, every major aerospace manufacturer around the world has the financial support of their respective governments. This type of support is critically important
because if one does not have leadership coming from the political sphere then little gets done. Leadership is important for creating coalitions, getting people to follow, and for getting reports, studies and initiatives through. Without good leadership in all of this, things will just stagnate (Interview 6).

This support is critically important in the areas of research and development because of the high costs associated with R&D work. Several interviewees were convinced that if the federal government were to stop giving its financial support to the aerospace industry, it would not be long before the aerospace industry in Canada would not exist.

Both the reports examined and the interviews make it clear political leadership has to come from the Mayor, the city bureaucracy, and the City Council. All of these critical political actors have a role to play. Setting the stage and driving the agenda has to come from the highest levels. The Mayor pushes the agenda along and he champions the cause. It must be remembered that the Mayor does not control a majority of City Council, as is typically the case at the provincial and federal level of government; instead he or she has to fashion a majority in order to see their initiatives at City Council come to fruition.

From there, the so-called “worker bees”, the bureaucracy, carry the load. But here too, leadership for cluster initiative comes from the top levels of the bureaucracy: the plan, or the strategy in terms of how to achieve the objectives comes from the senior bureaucrats (Interview 2). The leadership that comes from City Council is also critical: they are the ultimate legislative and deliberative body in local government (Interview 2). The leadership by the Mayor and City Council is important in so far as they recognize that it is a critical piece for the city’s (and region’s) economic development achieved through cluster-related innovation policy.
In October 1998, City Council endorsed and then recommended that an Economic Development Strategy Steering Committee be created. The primary task of this committee was to oversee the process of developing an economic development strategy for the City of Toronto. This had to occur given the nature of the changes in governmental structure that had taken place when the City of Toronto amalgamated on January 1, 1998.

Under the old system of government, there was the Regional Municipality of Metropolitan Toronto, and there were six boroughs, or six separate cities. Under this arrangement, the regional level of government was responsible for policies which affected all of the cities, such as infrastructure and waste management. After January 1, 1998, however, all of these cities were amalgamated into the one big City of Toronto and the regional level of government was dissolved. A mega-city form of governance was born.

Before amalgamation came into being, there was no such entity as an Economic Development Committee at the City of Toronto. Prior to amalgamation the Mayor in each city was responsible for economic development. However, six months after amalgamation was completed, City Councillor Brian Ashton put forward a motion to create an Economic Development Committee. Thus, an individual City Councillor played a primary leadership role in developing support for the creation of this Economic Development Committee. And it was City Council that played the primary leadership role in driving the Economic Development Committee to produce the new economic development strategy.
One of the goals of City Council was to design this economic development committee so that it would have the capacity to develop policy. Of course, City Council worked together with members of the bureaucracy at City Hall who possessed the expertise to develop the details of this strategy. The bureaucracy assumed a leadership role when it was developing the specific plans for the new economic development strategy (Interview 14).

In order to develop this strategy, City Council also decided to conduct a competitiveness study. Funding for this competitiveness study was included in the Economic Development work plan and budget for 1999 (City of Toronto, Staff Report, November 12, 1999:1.) City staff members from Economic Development were quick to recognize the importance of undertaking a more comprehensive study of this problem. They requested that people from the Ontario Ministry of Economic Development and Trade’s Urban Economic Development Unit, as well as people from the Urban Development and Planning Services Unit, become a part of the study. This study had six major objectives, one of which was to study “the scale, structure and performance of key clusters in the Toronto economy” (City of Toronto, Staff Report, November 12, 1999:1).

The research for this competitiveness study was carried out by a research consulting team. The consulting team was a consortium that was led by ICF Consulting. ICF is an internationally recognized firm specializing in economic strategies as well as in the analysis and benchmarking of economic clusters. The local consulting firms of Metropole Consulting and GHK International complemented this international perspective (Staff Report, November 12, 1999).
Once this research was finally completed, it formed the foundation of the City’s
disappointingly new economic development strategy. The City of Toronto’s new
economic development document entitled, Toronto Economic Development Strategy,
finally appeared on July 12, 2000. It is a synthesis of several important inputs that include
a comprehensive review of the competitiveness of the City’s so-called export clusters
(summarized in Toronto Competes: An Assessment of Toronto’s Global
Competitiveness), an in-depth benchmarking exercise (entitled Benchmarking Toronto’s
Economy—Year 2000), and deep consultation with a broad cross-section of leaders from
business, labour and the community, as well as Provincial and Federal government
officials, and senior staff within the City of Toronto administration (Toronto Economic

This report delineated the rationale for the City’s economic development strategy, and
it was one of a series of strategic policy documents that were prepared to guide the
decision-making process in the newly amalgamated City of Toronto. All of these
strategies were coordinated by the Chief Administrative Officer and they were developed
“under the umbrella of City Council’s Corporate Strategic Plan”. Toronto City Council’s
Corporate Strategic Plan was adopted by City Council in November 1999 (Toronto

Building on the insights of the reports mentioned above, Toronto’s Economic
Development Strategy report stressed the fact that clusters should be seen as the building
blocks of a regional economy. As this report succinctly states: “If city-regions are the
building blocks of the global economy, then clusters are the building blocks of a regional
economy” (Toronto Economic Development Strategy, 2000:25). Today, however,
clusters are rarely contained between the political, or administrative, boundaries that constitute a city. For example, each of Toronto’s clusters exceeds the boundaries of the City of Toronto as a mega-city to include the rest of the Toronto city-region (Toronto Economic Development Strategy, 2000:25).

Clusters came onto the agenda of the City in 1998, but the cluster concept, as Chapter 1 and 2 showed, had been discussed for several years earlier in the 1990s. When City staff members were asked who placed the idea of cluster development onto the City’s agenda, they indicated that it was City staff members who were members of the economic development profession that put the idea of cluster development onto the City’s agenda. It was presented as one of many types of approaches to economic development. However, once these economic development staff members succeeded in putting the idea of clusters onto the City’s agenda, it was actually the rest of the bureaucrats who drove this agenda forward (Interview 7).

The City of Toronto cluster development strategy relates back partially to the old economic development strategy that the City had before amalgamation took place on January 1, 1998. Before 1998, Metropolitan Toronto, as it was then known, had sector development specialists (Interview 2).

Of course, this concept was also used before Mayor David Miller was elected to office in 2003. Mayor Miller’s predecessor, Mel Lastman, supported the cluster concept, and now Mayor Miller fully supports the cluster development strategy, even though City spending on clusters operates across strict municipal boundaries.

Ten sectors were chosen for a much closer study, and the criteria that were used in this choice were based upon the sector’s employment profile and its growth rate. Of the ten
sectors that were chosen for this study, three of the most important were aerospace, apparel/fashion and Information and Communication Technology (ICT) (City of Toronto, Staff Report, November 12, 1999:2).

As significant as the creation of the City of Toronto’s new economic development strategy was, the fact remains that its creation was a very time consuming process. From the establishment of the first subcommittee in 1998, to the subsequent analysis and writing-up of the background research, required the expenditure of two full years of work on the part of the people involved. It would be a mistake, however, to assume that City Council did nothing with regard to economic development matters while this new strategy document was being developed. Prior to the actual document being finalized, City Council was already beginning to reform the system by putting resources there (Interview 14).

Therefore, what has been established with this first analysis of key documents is that the leadership for this initiative came partly from the Mayor but more broadly from Toronto City Council initially “under the umbrella of City Council’s Corporate Strategic Plan”. (Toronto Economic Development Strategy, 2000:2). Once the City’s new economic development strategy was fully implemented it had to start addressing specific problems which were contained within individual economic sectors. And as the years progressed one of the problem areas that began to emerge was that of the aerospace cluster.

Interestingly, interviewees for the aerospace sector case study did not think that any cluster-related innovation policy that was put forward by the City of Toronto has had any impact on cluster development whatsoever during the period being examined. More
bluntly and specifically, many interviewees also did not think that a cluster existed (Interview 1; Interview 3).

In some senses, this is neither a failure of the concept, nor is it necessarily a failure of policy, but rather may well be a failure of political leadership and of the execution of that leadership (Interview 1). And in order to understand why this is the case, we need to examine the next leadership initiative to come along after the development of the City’s new economic development strategy, namely, the creation and development of the Aerospace Action Partnership (AAP).

*The Creation of the Aerospace Action Partnership (AAP)*

The Ontario Aerospace multi-stakeholder group first came together in mid-2003 to discuss common challenges and shared interests within the industry. In September 2003, an Aerospace Roundtable was created, and it was here that representatives from all of the stakeholder groups laid the foundation for the Aerospace Action Partnership (AAP) (City of Toronto, Flight Path, 2005:1). The Aerospace Action Partnership (AAP) was established in January 2004. At a meeting of the Economic Development and Parks Committee in January, this same committee put forward a number of motions, two of the most important of which were the following: (1) That aerospace be recognized as a strategic industrial cluster that is crucial to Toronto and Ontario’s economic growth as a leader in innovative advanced manufacturing; and (2) That an Aerospace Action Partnership be established to guide the development and implementation of a comprehensive aerospace strategy. Councillor Maria Augimeri was appointed as the Economic Development and Parks Committee representative on the Aerospace Advisory Committee (City of Toronto, Minutes, January 14, 2004).
The creation of the AAP relates to the City’s overall *Economic Development Strategy* document because it builds on the original idea contained within this report which stated that clusters should be seen as the building blocks of a regional economy. And one of the aims and objectives of the AAP is to strengthen Ontario industry clusters.

At the outset of its creation the AAP was chaired by Councillor Maria Augimeri. This was part of a strategy that has been adopted by City Council to get a councillor to champion specific clusters. In that capacity if a particular councillor has a driving personality, they can help drive the development of policy and make changes happen.

The AAP was comprised of the City of Toronto’s Economic Development Office, as well as the cities of Mississauga, Brampton, Vaughan and Ajax. It also included the Canadian Auto Workers, the International Association of Machinists and Aerospace Workers, the Ontario Aerospace Council and all three levels of government. (City of Toronto, *Flight Path*, 2005:2). All of these cities are satellite cities that form the nucleus of the so-called Toronto city-region that exist beyond the Toronto mega-city.

When the people within the AAP first met, there was certainly an element of crisis at the time. De Havilland aircraft was in deep trouble, and there was a very distinct possibility that the plant was either going to be closed or moved. The de Havilland factory is the largest manufacturer in the City of Toronto, and that caused the City much anxiety and concern (Interview 13). Moreover, Toronto is also home to a number of important aerospace firms. So there was clearly a positive motivation on the part of the City to play a role.

The Toronto aerospace cluster concept was a natural extension at the city level. While aerospace is a national industry, with the province of Quebec having 45 per cent of the
national involvement, and the province of Ontario having about 35 per cent, the fact remains that in Ontario, eighty per cent of the aerospace sector is contained within the Greater Toronto Area (GTA) city-region.

The key objective of the AAP was to promote the growth of the aerospace cluster, in Ontario, even though the AAP was run by the City. During the period of time that the AAP actually held meetings, they produced a new strategic document called *Flight Path* that would become the guiding light for the industry on paper if not in practice. Over time, certain strategies were developed by the specific Task Forces which were created within the AAP for this purpose. Some of the strategies that were created by the AAP were the following:

- Strengthen existing Ontario industry clusters
- Focus on product and process technology development and commercialization
- Fully leverage the resources of Ontario’s colleges and universities
- Promote aerospace trade and investment attraction internationally (Flight Path, 2005:5).

However, some of the people who were interviewed expressed regret that the creation of the AAP has not lived up to this original mandate or to their original expectations (Interview 13).

Therefore, having the involvement of the Toronto cluster, and having the firms come together with all of the other stakeholders that comprise a cluster was a positive and fruitful thing to do. The failure of this whole exercise, however, as we see further below, has been in terms of actually getting down to really doing anything that was concrete and tangible. The aerospace cluster in Toronto, and in Ontario, has failed because it has not come to grips with doing real work. As the interviewees in this study have clearly indicated, the leadership of the cluster has failed to bring together the interested
stakeholders within the cluster—the academics and the various levels of government, and the industry associations, etc.-- to develop a proper cluster-related innovation policy which would seek to develop the new technologies that are required to support our aerospace industry in the future. Instead, they allowed themselves to become sidetracked into focusing on a production program, such as the Bombardier “C” series, and in the process they became obsessed with capturing some portion of that production work to the exclusion of other possible avenues of cluster-related innovation (Interview 1; Interview 3).

At this point, it is worth pointing out how the City of Montreal, and the province of Quebec, were light years ahead of Toronto, and Ontario, in terms of understanding how to bring about both aerospace cluster development, including the implementation of production work strategies to a particular Montreal and Quebec location (Niosi and Zhegu, 2005).

How did they do it? The production of aircraft started in Montreal in the 1920s. Several American, British and Canadian producers competed to produce small, regionally flown, propeller aircraft. Then, as has been previously mentioned in chapter three, the Canadian government created a new Crown corporation in 1944 and called it Canadair. This caused dozens of companies to become attracted to Montreal to supply parts and components for the planes being built at Canadair. Many other firms were eventually spun-off from Canadair as well (Pickler, and Milberry, 1995).

Then, in 1976, Canadair acquired the exclusive rights to the blueprint of the Learjet 600. The Learjet 600 was a business jet that was designed by the Learjet Corporation of Wichita, Kansas. After Canadair engineers made some local adjustments to the original
Learjet design, the plane became the Challenger 600; the first prototype of the Challenger
600 flew in 1978. In 1986, Canadair was absorbed into the newly created Bombardier
Corporation of Montreal and at that time Bombardier decided to enter the regional
aircraft market with a modified version of the Challenger 600. The final design of this
new regional jet was decided in 1987, and the first prototype flew in 1991. It was known
as the RJ 100 and it seated fifty passengers. Production of this jet was launched in 1993
(Niosi and Zhegu, 2005:15).

In only a decade Bombardier aerospace has become the world’s third largest producer
of aircraft, and Montreal has become a very productive aerospace city. Today Montreal
represents over 50 per cent of Canada’s employment in the aerospace industry. It is the
only city in Canada, and one of the very few in the world, that can design and produce an
entire aircraft (Niosi and Zhegu, 2005:15).

Another reason why the aerospace industry was far more successful in Montreal and
Quebec than in Ontario can be directly attributed to the participation of the Quebec
government with direct hard dollars, as well as their preoccupation with creating, in
effect, a Quebec counterweight to the Ontario automotive industry (Interview 1).

At the time of the creation of the AAP, there was a clear understanding within the
Ontario aerospace group, which was dominated by the Toronto aerospace group, that the
province of Quebec was doing a much better job of promoting and fostering their
aerospace industry. They were more focused on it, they understood it, and they provided
financial resources to their aerospace industry that Toronto, and Ontario, simply did not
have. Once the AAP was formed, it may have started out with grandiose ideas, the
primary idea being the formation of a Toronto aerospace cluster policy, and an aerospace
cluster, but as the weeks and the months progressed, the thinking changed to doing one thing and that was to save jobs for the “C” series at de Havilland. (Interview 1, Interview 2).

This is the great compromise that took place. How did this come about? The answer is both simple and complex. Even though Maria Augimeri was the leader of the AAP, and as such she exercised the primary leadership role, there comes a time when a group that starts out with such diverse interests needs to get to focus and a sense of closure. And closure often involves picking some one thing to do. So the “C” series of jobs at de Havilland became that one thing. For the unions on the AAP this was all they really cared about, and that started to become a big part of the overall collective thinking. Moreover, Ms. Augimeri’s interests were tied to de Havilland since the plant was located within her Ward, so she was perhaps more prone to accept this type of thinking than would otherwise have been the case (Interview 1; Interview 3).

In the end, however, this decision is what caused the Toronto cluster’s eventual demise and/or loss of a broader sense of energy and scope. Once the Ontario government lost their tender bid due to lack of funds, the Ontario government was not prepared to compete at the level of the Quebec government, the Toronto cluster was left with nothing to do. So the process just stopped. Since the AAP still survives, at least on paper, even though it has not formally met in almost three years, the leadership of the cluster needs to revitalize the AAP and get back to its original mandate and focus on the development of a proper aerospace cluster policy (Interview 1, Interview 3, Interview 5).

The people who were interviewed made it very clear that there was, and still is, a lack of focus on the right objective and also a lack of will on the part of the leadership. Some
call for someone with real vision to take them forward so that they can complete their original objective of full cluster policy and cluster development. There is no question in the view of many interviewees that one needs to create the cluster and one needs to create the linkages. But first one needs to focus on the mechanisms for creating it, and one needs to create not only the will within the various participants, but one also needs to choose the right grounds on which to work. Both of these things are definitely missing at present.

Therefore, what can be discerned from all of the above is that the development of a cluster-related innovation policy, as well as the development of a cluster, has to start with a solid foundation. While there has been some good work done initially, the real “spade work” has not been done for a cluster policy, and a working cluster, to take shape.

When our interviewees were asked how they would define spade work they indicated that one has to define the projects where people can do real work, and then get them to commit resources: money, human capital, equipment, what ever it takes, to get these projects on track and get them working (Interview 1, Interview 3). And pilot, or demonstration projects, of this kind are critical to the development of the cluster, regardless of whatever level of government involvement we are talking about.

A recent report to Industry Canada makes this point rather well (*Aerospace Industries Association of Canada (AIAC): Report of the Future Major Platforms Initiative, 2008*). If the Canadian government, along with all the other important policy actors, wants to strengthen this sector competitively so that it can face the competitive environment fifteen to twenty years down the road, which is where one has to be thinking in technological terms, then substantially different actions are going to have to be taken
from those which are currently being promoted at the present time. According to our interviewees, if this country continues on the current path, it will simply be a long, slow, downward slide into decline. Therefore, new initiatives need to be developed that re-energize this industry at the basic level of participation of the people who help to make a cluster policy, and a cluster, namely, the industry associations, key firms, universities and colleges, venture finance, all three levels of government, and the unions so that the focus is on the technology drive that fuels the competitiveness of the industry in the first place (Interview 1, Interview 3).

It is critically important to do this because aerospace is fundamentally a technology-based, and innovation-based industry. It is also about manufacturing the product, but it is driven from a competitive point of view by advanced technology. Without this, the future for the Toronto and Canadian aerospace industry is not a positive one.

Any deterioration, in terms of employment and jobs will be gradual, and it will take place over a twenty to thirty year period because that is the life span of the core aerospace product mix. Once a plane is in production what one has invested in, in the past, will continue for quite some period of time into the future, given the fact that these products stay in service for such a long period of time. But the erosion of the base starts the day that one stops investing in research and related innovation. When one stops doing the research, one is also eroding the future base of one’s competitiveness. Unfortunately, because people tend to be rather short-sighted, they don’t see the impact, immediately, of this failure on the part of the leadership in aerospace to invest in the future of the industry (Interview 1).
It appears that other countries are not as myopic. Both the Chinese and the Americans see aerospace as a long-term proposition and they are prepared to commit the resources for the long-term. In China, the aerospace industry is state-owned. The Chinese government considers this a strategic industry, and it sees Chinese firms becoming world-class producers by 2012. This will be accomplished through close cooperation with major international aerospace firms as well as by developing supplier relationships with non-Chinese companies. Chinese officials are trying to leverage the interest that foreign manufacturers have in obtaining access to their domestic market to negotiate favourable terms for many types of partnerships (Goldstein, 2005:4).

Moreover, it should come as no surprise to learn that the policy environment was used to bring about certain developments. In 1993, a resolution was passed by the 8th National People’s Congress that put the entire aviation industry under the control of the Aviation Industries of China (AVIC). The aim and objective of this exercise was to create an ultra-large industrial group, a group that combined military and civil aviation, and was capable of competing globally.

The Chinese regard the political economy of aerospace in China as being part of an industrial policy that will yield future benefits to their country. Ever since aerospace and aircraft manufacturing were given top priority status within the context of China’s overall science and technology program of research, training and education, resources that are designed for all of these capabilities have increased substantially. In the 10th Five Year Plan, more than CHY5 billion will be spent on research and development in commercial aerospace technology, as compared to CHY1.7 billion in the 9th Plan. However, it is
going to take a lot more strategic thinking, commitment, and money before the aerospace industry is firmly established in China (Goldstein, 2005:8-26).

The case of the United States illustrates no less of a commitment to their aerospace industry even though their country is a democratic republic and a fiercely capitalist society. That said the United States does represent an interesting case to analyze. According to conventional wisdom, the U.S. economy is run on free market or laissez-faire principles. On the surface this should mean that U.S. policy makers do not provide economic support for their industrial and commercial sectors. Perhaps in many cases this holds true; however, this is most definitely not the case with strategic industries such as aerospace.

The aerospace industry is of primary strategic importance to the U.S. government. In 1998, this industry generated sales in excess of $140 billion. It plays a critically important role in preserving, and enhancing, American economic, political and military power within the global system, and it is regarded as one of America’s most prominent symbols of technological dominance.

When one analyzes the role of federal policy for large commercial aircraft (LCA) it can be clearly seen that the United States government provides substantial financial subsidies to its large commercial aircraft industry. These subsidies come from both NASA and Department of Defense (DOD) programs (Lawrence, 2001:vii). For example, NASA subsidizes the United States large commercial aircraft sector via technology transfer from publicly funded R&D programs. NASA funding for R&D is necessary because the authorities recognize that private sector firms are either unable, or unwilling,
to provide sufficient funding for R&D. Between the years 1992-1997, the estimated aeronautics expenditure by NASA was in the order of $7.3 billion (Lawrence, 2001:viii).

The important point to understand about all of this R&D expenditure cited above is that the U.S. government does not see this financial support as a subsidy per se for the commercial aerospace industry. Rather, it is seen by the government as an investment to ensure that this industry continues to generate and produce “positive externalities for the U.S. economy” (Lawrence, 2001:36).

Therefore, it should come as no surprise that throughout most of its history, the aircraft manufacturing sector within the United States has benefited from what can only be referred to as an effective industrial policy (Lawrence, 2001:33). The reason why this is the case is due to the fact that support for the aerospace industry has been looked at as essential given the fact that aerospace technologies form the material backbone of the U.S. security system. That system is built around the primacy of the U.S Air Force in defence planning. And during the Cold War era in particular, it was inconceivable that the United States would have left the fate of military aerospace to the so-called free market since they faced an adversary who was capable of destroying both their cities and their infrastructure ((Lawrence, 2001:vi).

So even though it is true that Canada does not face the same daunting geopolitical problems and responsibilities that the United States faces throughout the world, it cannot be emphasized enough that Canada still needs to develop the same mindset with regard to our aerospace industry if we are to continue to be a successful aerospace country. If Canada does not adopt this mindset, over time this could serve to undermine our competitive position in this industry. Ultimately, this would have implications for the
development of a cluster policy and a cluster as well. At the moment there is an awareness that something is wrong; unfortunately, there seems to be a lack of vision that would allow Canadian government officials, along with the other policy actors who constitute the cluster, to begin to implement the proper policies so that the direction of this industry can be changed for the better.

As bleak as the above scenario appears to be, the fact of the matter is that an alternative leadership vision has already been developed by a concerned group of aerospace executives and other aerospace specialists. Rather than engaging in a production project such as the “C series, these concerned executives have developed an alternative research plan that would allow us to build those synergies that are so essential to developing a proper cluster policy in the first place.

This new research plan is called the *Report of the Future Major Platforms Initiative*. The Aerospace Industries Association of Canada (AIAC) identified the *Future Major Platforms Initiative* as a top priority in 2007. For over a year the AIAC, along with representatives from business, government and academia, carried out an extensive exercise to see which areas of weakness will hinder the future growth potential of the Canadian aerospace industry. A central element of this exercise was to better understand the new technology demands of any new programs, and how best the aerospace industry, assisted by government support programs, could make the necessary investments to develop and bring to market these new and much needed technologies (*Future Major Platforms, 2008:6-7*). This report has already been submitted to the federal government Minister who is in charge of Industry Canada in May 2008. It also appears that the Minister is taking this new leadership vision seriously, and that the appropriate people
within the aerospace sector in Industry Canada are deliberating the report’s content (Interview 1).

What this report identifies is the fact that both Boeing and Airbus will be replacing the Boeing 737 and the Airbus A320 within the next five to ten year period. The replacement program that is now known as the Boeing 737R and the Airbus A320R represents a $500 billion dollar opportunity for the global aerospace industry. Both Boeing and Airbus have recently declared that the reason they are not launching these replacement programs today is due to the fact that they lack the technology. So they have challenged the industry worldwide to look to key areas of technology and identify and work with them, be it Boeing or Airbus, to develop those technologies with a view to being participants in the next big thing (Interview 1; Interview 13).

The leadership vision that the aforementioned aerospace executives have developed can best be expressed in the following way: because the Toronto city-region represents a significant component of the Canadian industry, leadership needs to come forward within the city-region that will focus on how Canada (including Toronto) can participate in those future major platforms. The Toronto group of firms, and supporting institutions, needs to take a very close look at what Boeing, or Airbus, is asking for and then identify areas where we could potentially work. The next obvious thing to do is to pick a particular project and put together a proposal and then sit down with either company and say that we are prepared to put these kinds of investment dollars and these kinds of resources into this area of technology, over the next five year period with your support and collaboration. If we assume some degree of success here, we could be buying into a production program of immense proportions. If the aerospace sector in the Toronto city-
region even won one per cent of the program, this could lead to something in the five billion dollar range.

However, the investment needs to be strategic and it needs to be technologically focused. The funding for this type of project needs to include funding for the universities and their participants. In many respects the funding can be obtained from existing resources, such as the Natural Science and Engineering Research Council (NSERC). In the case of the university and academic environment NSERC has a budget of over $2 billion per year that they invest in research and technology projects in science and engineering. The aerospace executives who have developed this report have already approached the Assistant Deputy Minister at Industry Canada who is responsible for the program. Anything that causes the university sector to work more closely with the industrial sector to develop technologies from concept through to industrial process is something that they are keenly interested in supporting (Interview 1, Interview 13).

So once again what we see here is a lack of leadership on the part of the AAP, but there is also a lack of people who are willing to collaborate. If there is one weakness that is really identifiable in the Canadian aerospace industry, when contrasted with either the US or European aerospace industries, it is the lack of collaboration between the academic sector and the industrial sector. In Canada, in the view of some of our interviewees, there is a wall between these two sectors that does not easily get bridged (Interview 1; Interview 3). Strengthening this weakness in the coming years will be critically important as this is one of the key factors that helps to create a proper cluster-related innovation policy and a cluster.
If we take the long view, however, a key issue for Canada, and a key issue for the Canadian aerospace industry within Canada, is where these companies will fundamentally do their research and make their products. And without the dynamics of a strong technology policy, along with the development of this technology, these jobs are not going to be here. If Canada cannot be as competitive in the field of manufacturing, given the realities of globalization, the only thing that Canada can retain, and develop even further, is our technology. If we do not understand this soon it will be too late and the technology will flow out of the country. That is why leadership is such a critical factor here, and that is why the future major platforms initiative is the beginning of developing that shared vision of the future (Interview 1; Interview 3). However, it will take all of the stakeholders that comprise the cluster to bring this about.

Agenda for Prosperity

The third, and final, leadership agenda document that deals with cluster policy and development is the *Agenda for Prosperity*. In June 2006, Mayor David Miller established the Mayor’s Economic Competitiveness Advisory Committee. The purpose of this committee was to help forge a culture of partnership that he saw as essential to achieving sustainable economic growth. This Committee was chaired by Mayor Miller, and it included representatives from the worlds of business, labour, and academia, as well as the Chair of the Economic Development Committee, the Chair of the Budget Advisory Committee and two councilors-at-large (Agenda for Prosperity, 2008:6).

At that time the Mayor asked the Committee members to give him their best advice on what could be done to improve Toronto’s quality of life by stimulating economic growth.
The Committee members outlined initial directions and met in small groups, as well as in full Committee, to develop this Prosperity Agenda.

This document also took a long period of time to develop. From the time the initial Committee was formed to the day this report was published meant yet another two full years of work on the part of the people involved. A background document was prepared which recapitulated the central ideas about cluster theory and cluster development and how these might apply to the situation in Toronto (Rosen, 2007). And while it is true that the appropriate nod to innovation policy and cluster development is made, critics of this document state that it is too broad-based a document to be effective. Moreover, this economic document agenda does nothing to build upon the previous economic development strategy that was put forward in July 2000 when the newly amalgamated City of Toronto published its *Toronto Economic Development Strategy*. People who care about economic development were hoping to see how the cluster concept and cluster policy could be taken to another level within the City of Toronto (Interview 14).

Nevertheless, Mayor Miller has succeeded in putting his stamp on economic development within the City. He provided the primary leadership role for this initiative and he drove the process so that the final document would be completed (Interview 14).

However, even though municipal political leadership, in all of its forms, is critical to the success of establishing a cluster policy and a cluster, what happens at the level of industry leadership is equally important. At the industry level, it is critical that far greater leadership is forthcoming from industry than has typically been the case. This is easier said than done, however, given the scale of the firms, given the varied economic conditions of those firms, or their history and attitude, over time, towards working or not
working with the government or other cluster participants. In some cases if one is dealing with a foreign subsidiary they will be greatly involved; in other cases, they will not be very involved given their location or particular product or R&D focus. Interviewees have stated emphatically that whether speaking of business or other political leadership that it is sustained leadership over time that is critical as opposed to leadership only at one point in time. Unfortunately, there is very little that one can do to instill the fortuitous development of individuals into a firm, but there has to be a certain receptivity to this, and also encouragement of it, and that encouragement is the challenge (Interview 4).

One has to understand that the maturity of that leadership is also critical, and regrettably that is something that cannot be bred. It is a long evolutionary process. There maybe serendipitous occasions when certain individuals are influenced at the right time, and they may recognize that in order for that leadership to continue it has to go beyond the individual leader, or small group, and that can be hard to accept by persons who show initial forms of leadership. In the end, however, municipal action, or inaction, provincial action, or inaction and federal action, or inaction, can harm the cluster (Interview 4).

One brief example clearly illustrates this point. While it is true that there are many aerospace firms in Ontario, it is also true that most of them are located in what is referred to as the Greater Toronto Area, or the GTA. So it would be advantageous for not only the City of Toronto but for other cities in the GTA to work together. But the fact of the matter is that they rarely do, and thus there is a whole range of important questions that are not even addressed.

Our leadership variable and related questions also took into account the problem of civic or community leadership. Civic leadership is different: it involves a well-connected
person, who may come from the business world, or from social charities, but who acts as a catalyst for a much broader vision of social cohesion and inclusivity for his or her community.

Here the interview results were disappointing. Some interviewees were of the opinion that civic leadership is lacking within the aerospace sector; however, those interviewees who thought this way agreed that civic leadership was necessary and that if it is lacking it should be developed. The problem, however, is that there is a shortage of leadership everywhere, political, industry and civic, and that is part of the leadership challenge overall (Interview 7, Interview 13).

As important as all of the above insights are to our discussion of the leadership variable, there were a few other cogent remarks that our interviewees made that we felt were worthy of inclusion into our overall discussion of leadership.

There is also a lack of industry leadership when it comes to the development of the aerospace sector that is caused by the weakness in some of the industry associations. However, the aerospace sector is fortunate in many ways in that they have a fairly decent association that can actually provide some industry leadership. This implies, however, that some people think even more needs to be done by the major association to foster such leadership (Interview 7).

The bureaucracy within the City should be taking a leadership role by asking itself what are the other small regulatory or financial issues that the municipal government has at its disposal. Usually, the City finds that there are certain development charges, certain other fees and services, along with certain provisions of public services, that can assist in this matter.
However, while it is true that the leadership variable is very important for the development of a cluster-related innovation policy, for the City of Toronto, leadership without local government financial resources cannot achieve very much. It is to this issue that our attention is now directed vis-à-vis the aerospace cluster, and more generally as well.

**LOCAL GOVERNMENT FINANCE**

As stressed from the beginning, one of the primary problems the City of Toronto faces is the relative lack of financial resources. This is the case given the fact that the property tax is the major source of revenue generation that is available to the City. Moreover, the City is prohibited under the law from incurring a budgetary deficit on the operating side of its budget. If we begin to look at the budget summaries of gross expenditures we can start to see what a deleterious effect this has had on the City’s ability to engage in economic development, in general, or any kind of cluster-related innovation policy in particular. We examine below the budgets from 1998, the year of amalgamation, 2004, the year that the AAP was formed, and 2006, the year that the Agenda for Prosperity Committee was formed by Mayor Miller. We shall also include the budgetary figures from 2008, the year in which the Agenda for Prosperity was published.

Table 5.2  **City of Toronto Operating Budget Summary of Expenditures ($000’s)**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>5.6 billion</td>
<td>6.6 billion</td>
<td>7.6 billion</td>
<td>8.2 billion</td>
</tr>
</tbody>
</table>

Source: City of Toronto, Operating Budgets. At: [www.toronto.ca/budget](http://www.toronto.ca/budget)

Table 5.2 is a summary of expenditures of the Operating Budgets for the City of Toronto over the last ten years. The Operating Budget is the budget that the City
produces each year, and it consists of all the services that are needed for the citizens who
live in Toronto. A sample of the range of services includes children’s services, economic
development, public health, public transportation, subway, streetcars and buses, and
social services. If we look at the budgetary figures, we can see that from 1998 until 2004,
a period of 6 years, the budget increased by only $1 billion. However, during the period
from 2004 to 2006, the budget also increased by $1 billion. But from 2004 until 2008, a
period of only 4 years, the budget increased by $1.6 billion. Overall, however, from 1998
until 2008, the increase in the budget was $2.6 billion.

Perhaps more than anything else these budgetary increases reflect a complex set of
myriad demands and responsibilities that are placed upon a city like Toronto. But if the
overall budget for the City of Toronto has grown in major proportions, as Table 5.2
clearly indicates, the same cannot be said for the amount of money that goes towards
economic development and related sector and cluster initiatives in particular.

Table 5.3  City of Toronto Operating Budget Summary of Expenditures ($000’s)

<table>
<thead>
<tr>
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<th></th>
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</thead>
<tbody>
<tr>
<td>ECONOMIC DEV. &amp; TOURISM PROGRAM</td>
<td>7,275,090</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECONOMIC DEV. PROGRAM</td>
<td></td>
<td>7,627,000</td>
<td>7,852,000</td>
<td>9,489,000</td>
</tr>
</tbody>
</table>

Source: City of Toronto, Operating Budgets. At: [www.toronto.ca/budget](http://www.toronto.ca/budget)

Before we begin to analyze the above data in Table 5.3, a word must be said about the
data’s authenticity and how we arrived at these figures each year. Until the year of
amalgamation, in 1998, the money allocated to tourism was included in the overall
Economic Development and Tourism Program. After 2003, however, the City starts to make changes to the structure of City government and with these reforms come changes to the way in which the budget is created. In the City’s 2004 budget, the Economic Development Program has been separated from Tourism, and it receives its own share of money. By the time we arrive at the year 2005, the City has placed Economic Development, Culture and Tourism together, and each one of these programs receives its own financial envelope of funding. This practice continues with the 2008 Budget as well.

If we look at the Economic Development budgetary figures, we can see that from 1998 until 2004, a period of 6 years, spending on economic development, in general, only increased by a little more than $351,000. As we reflect upon this figure, we also have to remember that for the year 1998, spending on the Economic Development Program included spending on the Tourism Program, so some of the $7,275,090 went to tourism development. Between the years 2004 to 2006, spending for economic development only increased by $225,000. But between the years 2006 to 2008, spending on the Economic Development Program increased by $1,637,000. Overall, however, between the years of 1998 to 2008, spending on economic development, in general, only increased by $2,213,910. But as we have already established, during this same time period increases in the overall aggregate budget for the City of Toronto were in the order of $2.6 billion.

Table 5.4, a Table that is a composite of Table 5.2 and Table 5.3 clearly illustrates the discrepancy that exists between the City’s aggregate budget and the money that is allocated for economic development.
Table 5.4  Comparison of Budget and Economic Development Expenditures

<table>
<thead>
<tr>
<th>YEAR</th>
<th>INCREASE IN CITY OF TORONTO AGGREGATE BUDGET (000’s)</th>
<th>INCREASE IN ECONOMIC. DEV. BUDGET (000’s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998 TO 2004</td>
<td>$1 Billion</td>
<td>$351,000</td>
</tr>
<tr>
<td>2004 TO 2006</td>
<td>$1 Billion</td>
<td>$225,000</td>
</tr>
<tr>
<td>2006 TO 2008</td>
<td>$0.6 Billion</td>
<td>$1,637,000</td>
</tr>
<tr>
<td>1998 TO 2008</td>
<td>$2.6 Billion</td>
<td>$2,213,910</td>
</tr>
</tbody>
</table>

Source: Created from City of Toronto, Operating Budgets. At: [www.toronto.ca/budget](http://www.toronto.ca/budget)

Some of the increased spending during this period of time can be accounted for by the actions of Mayor Miller. It was the Mayor’s second term in office and he was anxious to place his stamp on the economic development portfolio within the City. Given the changes that have taken place since the new City of Toronto Act came into effect in 2007, the Mayor is still restructuring the City government. He has started to centralize power in the Mayor’s Office, and he has drawn together a group of people who begin to form a policy shop so that they can better control the agenda and make strategic plans which they can then prioritize through the new Executive Committee, which serves the function of almost being a new quasi Cabinet (Interview 14).

Moreover, we cannot forget that the Mayor’s Economic Competitiveness Advisory Committee was formed in June 2006 (Agenda for Prosperity, 2008:6). And even though it will be two more years before the Agenda for Prosperity report is completed, it is not unreasonable to assume that resources are being placed into priority areas that this document deals with prior to its completion. One of the priority areas was economic development and cluster formation (Agenda for Prosperity, 2008:18). This is the type of strategy that was followed during the time the City’s new Economic Development Strategy was being created after amalgamation of the City of Toronto took place.
(Interview 14). A quick look at Table 5.4 seems to suggest that this could have been the case. Between 2006 and 2008, the amount of money allocated for economic development was increased from $225,000 to $1,637,000; this represented an increase of $1,412,000 over a two-year period. Therefore, it appears that more resources were being put into economic development, in general, prior to the release of the Mayor’s formal report.

The fact that more resources were put into economic development is also reflected in background documents that the City developed for its 2008 budget. One of the Mayor’s priorities is to build a strong City with a strong economy. In order to accomplish this, it will be necessary to “work with the Mayor’s economic advisory committee to build the work plan and implement actions contained in the Agenda for Prosperity”. One of the ways this will be achieved is by growing further “key sectors of the economy such as biotech, business and financial services and information technology,” among others (City of Toronto, Analyst Briefing Notes, January, 2008:11). Clearly resources will be needed to achieve these objectives and it appears that some of these resources are already being placed into the economic development file.

However, a major problem remains, namely that when we speak about economic development in general, we are not just referring to the formation of an innovation policy, or cluster policy, or even to cluster development. Economic development can encompass many different areas such as business attraction and retention and the development of Business Improvement Areas (BIAs). So it would be helpful for us if it were possible to obtain figures that clearly indicate just how much money is put into sector development or clusters. Today the two words are often used to mean the same thing.
Obtaining financial data for this aspect of the research has posed many problems. As difficult as it is to believe there is no centralized repository of municipal finance data in Canada. Moreover, even the provincial government’s holdings are weak and rather inconsistent (Young and McCarthy, 2009:360). To make matters worse, as we have seen the actual City Budgets have undergone significant changes over the years, with some items that were beneficial to research purposes being discontinued, while other, more worthwhile items are not even included within the general figures.

However, fortunately for us one piece of concrete evidence was found within a document that corroborates the interview data that was obtained. In 2006, a Budget Advisory Committee Agenda meeting listed the Economic Development Sector Initiatives costs as part of the overall Operating Budget for 2006. While these are only in aggregate form, they nevertheless are very helpful. They were listed in the following manner:

<table>
<thead>
<tr>
<th>Economic Development Sector Initiatives</th>
<th>Gross ($000s)</th>
<th>Net ($000s)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>220.5</td>
<td>220.5</td>
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</table>

This amount of money, $220,500, represents the aggregate figure that would be allocated to the 7 cluster initiatives that the City is developing (City of Toronto, Budget Advisory Committee, February, 2006:10). If we divide this $220,000 by 7, we obtain a figure of just over $31,000 per cluster. This figure substantiates the data we have obtained from interviews which stated that the figure for cluster development was about $30,000 per cluster, an incredibly small funding base.

Since we conducted numerous interviews prior to the annual budget review by City Council in 2008, we were told that the total budget for the City of Toronto’s economic
development initiatives was over $7 million per year. This does not include the money for tourism which is now a part of the economic development portfolio. The $7 million is both for staff and operating costs. When it comes to actually dealing with specific sector or cluster development, there would be a staff of five professionals involved, one manager, one program assistant and the Director. Eighty per cent of this money goes into staff salaries. So the actual sector development budget for operating is $132,000 annually and this is split across 7 clusters. What is added to this figure is whatever the City can leverage out of grants. So the total value of the program is much larger than what the City puts in because the City can hopefully leverage a fair amount of money. However, this is all done on a project basis (Interview 7).

If we look at the aerospace cluster in particular, we see that the City spends about $8,000 annually. This is the figure that is on paper, but in practical terms the City spends about $15,000 annually, if traveling to trade shows and other events is taken into consideration. The $8,000 is all for operating costs (Interview 7). This is not a lot of money for cluster development in aerospace; however, if we compare this to a few of the other clusters that the City is developing, we see that biotechnology receives an annual budget of $25,000, and financial services receives an annual budget of $15,000 and ICT receives an annual budget of $25,000. On average, the amount of money that is available per cluster is around $30,000 (Interview 7). One key fact really puts this whole process into perspective. In the year 2008, the City budget was over $8 billion, and out of this vast budget, a City budget that is larger than that of some other Canadian provinces, the City is spending about one per cent of this to operate its cluster development program (Interview 7).
By way of comparison, one of the interviewees pointed out the fact that the City of Montreal is much more deliberate and focused on its economic development strategy based on clusters than is the City of Toronto. Part of the reason for the difference between these two cities revolves around the issue of federal money that has been made available to Quebec. When the provincial government combines the money it is receiving from the federal government, the provincial government is able to distribute monies in the order of $2 million per cluster; and this has been a real vehicle for collaboration, something that is essential for the development of a successful cluster policy and cluster formation. This amount of money brings people around (Interview 11). When the City of Toronto puts in $30,000 per cluster, this does not have a lot of leverage within the industry. So the City is there, “but the City is dabbling in it” (Interview 11). But Montreal has a huge amount of money that they can put into a really defined cluster. Moreover, Quebec is doing much more theoretical work on clusters, whereas Toronto is doing more pragmatic work on clusters. So the way that Quebec has approached the program is different (Interview 11).

In the case of Toronto, when one only has $30,000 to spend one has to figure out how best to spend that money. However, if one has a guarantee of $2 million, one has the opportunity to build a program, a big program, and one can have a focus on international activities and then one can produce very good quality work (Interview 11). One also has the opportunity to have real staff as well. In Montreal, they have three staff working on each cluster. So they have an ability to work with that particular industry and push it in a way that the City of Toronto cannot. When one has only one person working part-time on
a cluster, it is very difficult to actually move a whole industry, and in this case one is talking about 10,000 firms. So it is a big challenge (Interview 11).

All of this really takes us back to asking the City what role the economic development office plays in supporting economic development policy and cluster-related innovation policy. In terms of general policy the City sees itself playing both a leadership role and a supporting role. Recently released publications like the *Agenda for Prosperity* help to set a policy direction for the City that is internally delivered. This can be delivered as tax policy, land use policy, planning policy and cluster policy (Interview 11).

However, as we have seen all too clearly when we have looked at the above financial Tables, the City is not spending nearly enough money to be capable of developing a cluster-related innovation policy to really become a serious player and match that of Montreal. For years, funding for economic development in general grew very slowly, and this no doubt affected the amount of money that could be used to develop a proper cluster policy and clusters. Moreover, the City itself is starved of funds since it can only count primarily on the revenue that is brought in from the property tax to fund the majority of its obligations. At the beginning of 2009 the City enacted two new taxes: a land transfer tax on new housing, and a registration tax on the renewal of car licenses, but it remains to be seen how much revenue this will generate. Given the fact that the City of Toronto is only using about 1 per cent of its budget to fund economic development and sector initiatives, it is clear that in order for the City to obtain more resources it needs to collaborate with the other levels of government.

One way in which the City can aspire to fulfill its leadership role in the area of economic development and cluster policy would be by utilizing the mechanism of multi-
level governance and the programs and funding that comes with this approach to
governance. Let us now turn our attention to the issues and concerns regarding this third
and final framework variable.

MULTI-LEVEL GOVERNANCE PROGRAMS AND ACTIVITIES

Given the evidence from the previous section, it is clear that the only way the City of
Toronto can overcome its financial difficulties and obtain the necessary resources to
engage more fully in developing a cluster-related innovation policy is by utilizing the
multi-level governance approach to policy development and resources. This would allow
the City to avail itself of the various programs, activities and resources that the other
levels of government can provide to the City.

This section will be divided into two main parts. The first part will describe the
various programs and resources that are available to the City and to firms from both the
provincial and federal governments. The second part of this section will describe the
findings obtained from the interviews on this matter.

Ontario Programs

The first group of programs that merit attention are those that are provided by the
Ontario provincial government. There are two programs that are important: (1) the
Advanced Manufacturing Investment Strategy (AMIS), and (2) the Next Generation of
Jobs Fund.

The Advanced Manufacturing Investment Strategy (AMIS) is a $500 million
repayable loan program to encourage firms to invest in leading-edge technologies and
processes that will increase productivity and competitiveness. AMIS was created in 2006.
It provides up to 30 per cent of the total eligible costs of a project; however the total cost
of a project cannot exceed $10 million. As stated above, the form this payment takes is that of a repayable loan, and the loans are interest and principal free for five years provided that the firm meets certain job and investment targets (www.ontariocanada.com/ontcan/1med/_en.jsp). AMIS does not provide loans for business restructuring or regular capital investment. AMIS is administered through designated officials at the Ministry of Economic Development (MED), Sector Competitiveness Branch, of the Government of Ontario.

By encouraging Ontario manufacturers to invest in leading-edge technologies using AMIS, policy-makers are hopeful that the following objectives will be met:

- Increase the adoption of advanced manufacturing technologies and innovative practices in the province;
- Grow and retain highly skilled employment in a range of sectors;
- Leverage new investments in the province;
- Build on the strength of the province’s manufacturing sector;
- Allow Ontario manufacturers to better compete on a global scale

The Advanced Manufacturing Investment Strategy (AMIS) is open to all manufacturing sectors. Eligible projects must create or retain 50 or more jobs, or have a minimum total project investment of $10 million over five years. Furthermore, eligible projects must be conducted at facilities which are situated within the province of Ontario, and they must be undertaken by firms that operate, or will operate, in Ontario (www.ontariocanada.com.ontcan/1med /en.jsp).

The Minister of Economic Development, along with the Minister of Finance, approves projects based on the recommendations of the AMIS Assessment Committee. Once the decision is rendered it will be final and binding. The members of the AMIS Assessment Committee are senior officials of the Ministry of Economic Development and Trade, the
Ministry of Finance, the Ministry of Research and Innovation, and the Ministry of Small Business and Consumer Services (www.ontariocanada.comontcan/1med/_enjsp).

The second provincial program that we need to profile is the Next Generation of Jobs Fund. It is a five-year, $1.5 billion strategy to help innovative firms take the lead in worldwide markets which offer long-term growth potential. This program is modeled after the government’s successful $500 million Ontario Automotive Investment Strategy which leveraged $7 billion in new auto investments. The Ministry of Economic Development is responsible for administering this program which was created in March 2008. The Next Generation of Jobs Fund supports projects that are going to be globally competitive and it also supports projects that will create and protect high-value jobs in such key sectors of the economy as IT, digital media, biotechnology and green technologies (www.omafra.gov.on.ca/next-gen-jobs.htm).

NGOJF specialists have created three types of programs in order to encourage firms to invest. These programs are (1) Biopharmaceutical Investment Program; (2) Jobs and Investment Program; and (3) Strategic Opportunities Program. Unfortunately, due to the recent worldwide economic recession, the third program has been cancelled until further notice is given by the Ministry of Economic Development.

The Next Generation of Jobs Fund program is open to Canadian and foreign incorporated firms provided they have an incorporated Ontario Canadian subsidiary. Ontario manufacturers whose projects will create, or retain, 100 high value jobs, or manufacturers who are making an investment of at least $25 million are the type of candidates who qualify for this program.
The purpose of the Jobs and Investment program is to support research, development and commercialization in innovative industries and attract new investments and jobs in areas of great potential for Ontario. A partial list of these innovative industries include the following:

- Anchor investments to support cluster development, including in the service sector;
- Develop green auto research, parts production and assembly;
- Further develop financial services that involve global or North American mandates and the establishment of new, discrete operating units
- Clean fuels research, development and commercialization
- Further develop creative industries such as digital media, and information and communication technology

From the list above it can be seen that the NGOJF specifically targets investments to firms in emerging industries. The Jobs and Investment program provides grants up to 15 per cent of eligible project costs, while the Biopharmaceutical Investment Program provides grants, loans, forgivable-interest loans and funds for building infrastructure, research and training (www.omafra.gov.on.ca/next-gen-jobs.htm).

Federal Programs

The first federal program that the City can avail itself of is the Community Investment Support Program (CISP). CISP was created in 1998 and it supports initiatives that attract, promote and sustain foreign direct investment in Canadian municipalities. This program “assists with developing the tools needed to attract and retain investment, developing business cases, and planning and executing promotional initiatives” (www.cisp.gc.ca). The program is coordinated by Invest in Canada, within Foreign Affairs and International Trade Canada.
Within these municipalities certain eligible recipients can apply for this program. They fall into one of three categories: (1) smaller communities with limited economic development resources; (2) mid-sized regions with some professional staff and existing economic development programs; and (3) larger regions and communities with active foreign investment programs that want to implement multi-year attraction and retention strategies. CISP specifically encourages applications from regional groups of communities because regional alliances can significantly enhance an area’s appeal to foreign investors. This can result in new investments that extend beyond the borders of a single community (www.cisp.gc.ca).

The CISP program has three main objectives:

- Focusing on supporting the attraction, retention and expansion of foreign direct investment;
- Working through partnerships;
- Sharing costs

CISP is a grants and contribution program. It provides matching funds of up to 50 per cent of eligible project costs per year. The total CISP contribution cannot exceed $300,000 per project per year. If a community accesses other federal government support, the total federal support cannot exceed 50 per cent (www.cisp.gc.ca).

Communities can use their support from CISP for a range of activities that lead to securing foreign direct investment. A selected sampling of activities that CISP can support includes the following:

- Investment training for economic development staff
- Developing and implementing a targeted strategy for encouraging investment
- Developing and implementing a targeted strategy for retaining and expanding existing investments
- Conducting business retention and expansion research
So far evidence seems to suggest that this program has been effective. In 2005-2006 CISP funded 125 projects across Canada providing contributions of over $4.7 million. In Toronto, CISP was used by people within the aerospace cluster to fund the study of their new aerospace strategy document *Flight Path*. The important point to note about a program such as CISP is that it is one of the few programs that the City can access directly. It is a government-to-government type of program, not a government-to-firm type of program, as is the case with some of the other programs described below.

The second federal program that is important for the time period this thesis is covering is the program Technology Partnerships Canada (TPC). This program was established in 1996, and its mandate was to provide funding and support for strategic research and development (R&D) and demonstration projects that would produce economic, social and environmental benefits to Canadians. TPC invested in innovative technology R&D projects that were undertaken across the Canadian economy. This program was administered by the Industrial Technologies Office which is a Special Operating Agency of Industry Canada (Technology Partnerships Canada, Annual Report 2004-2005. Available at: [www.ito.gc.ca](http://www.ito.gc.ca)).

The TPC program made conditionally repayable loans to firms in Canada that were engaged in research and development in areas of technology that promoted innovation, commercialization, sustainable development and increased investment. The investments that were made in these projects targeted a wide spectrum of technological development. The program focused on key technology areas such as environmental and enabling technologies that included biotechnology and health-related applications, but it also
focused on aerospace and defence technologies, as well as manufacturing and communications technologies.

TPC was also involved in a cooperative joint venture with the National Research Council of Canada’s Industrial Research Assistance Program (IRAP) to deliver the TPC program to Canadian small and medium-sized enterprises (SMEs). SMEs are defined as firms with fewer than 500 employees. This partnership encouraged innovation across the country by investing in projects that had authorized eligible costs of $3 million or less. TPC and IRAP each provided 50 per cent of the budget for the joint TPC-IRAP program.

SMEs in the aerospace world were especially fortunate in that they received assistance from the Aerospace and Defence Supplier Development Initiative (SDI). This three-year program was designed to help SMEs in aerospace improve their technical, quality assurance and management systems capabilities in order to better position them for growth beyond their current tier level within the aerospace and defence supply chain. However, the SDI program concluded on March 31, 2005, but during the three years of its existence this $30 million initiative provided much needed assistance to 49 firms (Technology Partnerships Canada, Annual Report 2004-2005:15).

Overall, however, this program appeared to be a reasonable success. In 2004-2005, TPC signed for 31 new projects for an investment commitment of $256.5 million. Through the TPC-IRAP program, 40 projects were contracted for an additional $15.7 million. As of March 31, 2005, these investments brought TPC’s total R&D portfolio, including the TPC-IRAP program, to 693 projects, totaling more than $2.8 billion of which $2.1 billion has already been disbursed. It should also be noted that 88.6 per cent of these projects targeted SMEs across Canada.
Moreover, these projects have leveraged an additional $11.1 billion in private sector innovation spending (almost $4 for each dollar invested by TPC), which means that TPC has facilitated investment decisions totaling $13.9 billion (Technology Partnerships Canada, Annual Report 2004-2005:2).

Despite the success of the TPC program, the federal government eliminated this program on December 31, 2006 (www.ito.gc.ca). At that time, many people in the manufacturing sector vehemently opposed the elimination of this program. However, concerned stakeholders within the aerospace sector started to lobby the federal government over the possibility of creating a new federal program that would only be used by the aerospace sector. Their wish was granted when the federal government created the Strategic Aerospace and Defence Initiative (SADI).

In May 2007, the Government of Canada released its Science and Technology (S&T) strategy entitled Mobilizing Science and Technology to Canada’s Advantage. SADI is an important part of this S&T strategy (www.ito.gc.ca). SADI was launched on April 2, 2007, and it was created to support Canada’s aerospace and defence (A&D) industries. This support is provided through repayable loans to Canadian firms as they undertake research and development (R&D) projects in the aerospace, defence, space and security sectors (www.ito.gc.ca).

SADI was developed with three key objectives in mind:

- To encourage strategic R&D that will result in innovation and excellence in new products and services;
- To enhance the competitiveness of Canadian A&D firms;
- To foster collaboration among research institutes, universities, colleges and the private sector
In order to be eligible to receive SADI support, applicants and their projects must meet five eligibility requirements. First, SADI assistance is only available to Canadian incorporated firms that conduct strategic R&D activities in A&D industries that create opportunities for Canadians to contribute to a highly skilled and knowledge-based workforce. Second, the proposal must demonstrate that the firm’s project will be comprised of eligible activities. These activities are defined as industrial research and pre-competitive development. Industrial research is planned research whose aim is the discovery of new knowledge whereby this new knowledge will be used to develop new products, processes or services. Pre-competitive development is the translation of industrial research findings into a plan, blueprint or design for new, modified or improved products, processes or services with a view to initial demonstration or pilot projects. Third, the project must include strategic R&D activities that either support the development of next generation A&D related products and services, or build on Canadian strengths in A&D technology development, or enable Canadian firms to participate in major platforms and supply chains. Fourth, the applicant must demonstrate that government support is required to meet the scope and timing of the project. Fifth, unless it is otherwise agreed to by the Minister, any strategic R&D and/or manufacturing of high-value added technologies must take place here in Canada (www.ito.gc.ca).

The SADI program is expected to invest nearly $900 million over the next 5 years, with funding to reach a maximum of $225 million per year. During SADI’s first two years, more than $415 million was committed to 10 innovative projects thus encouraging an additional $768.8 million in R&D investments. Each SADI dollar that has been invested has leveraged an additional $1.85 in R&D investments (www.ito.gc.ca).
In addition to these direct federal programs, there are several programs that have an
indirect bearing upon the aerospace sector because they apply to all knowledge-based
technologies.

One such program is the National Research Council’s Industrial Research Assistance
Program (IRAP). IRAP is an innovation and technology assistance program for small and
medium-sized enterprises (SMEs). This program provides financial, technological and
networking assistance to firms in communities across Canada. For over 60 years, NRC-
IRAP and its predecessors have been helping Canadian firms improve their performance
through technological innovation (Doern and Levesque, 2002). It is regarded world-wide
as one of the best programs of its kind in existence (http://irap-pari.nrc-cnrc.gc.ca).

NRC-IRAP has built a new innovation infrastructure for Canada, the Canadian
Technology Network (CTN). The Canadian Technology Network was created in 1994.
This is a national network that is comprised of more than one thousand institutions and
organizations which are focused on addressing the multiple innovation challenges that
today’s SMEs face. CTN acts as an information channel between the different sets of
actors who come from the following areas:

- Governmental and business service organizations;
- Industrial and professional associations;
- R&D and technology transfer organizations;

The primary strategic objectives of the NRC-IRAP program are to (1) increase the
innovative capacity of Canadian small and medium-sized enterprises; and (2) to become
the national enabler of technological innovation for Canadian small and medium-sized
enterprises. This is largely accomplished by providing technology assistance to SMEs at all stages of the innovation process.

NRC-IRAP uses a field staff of professionals who are recognized for their scientific, technical, business expertise and knowledge of the innovation process to provide its clients with value-added advice and financial services. These so-called Industrial Technology Advisors (ITAs) deliver customized service to NRC-IRAP clients through a national network of 240 ITAs who are located in 90 communities across Canada. Their job is to coach a client project through all of the stages of the innovation process, as well as to provide technical advice, referrals and other innovation services as required. As has been previously mentioned, an SME is a Canadian enterprise that employs less than 500 people but which still has the potential to innovate.

This NRC-IRAP network plays an important role in bringing together all the key players in the Canadian Innovation System for the benefit of these SMEs. These extensive networks link entrepreneurs, people who are knowledgeable about local sources of financing, R&D institutions and technology brokers, and technology transfer centres (http://irap-pari.nrc-cnrc.gc.ca).

Programs that improve regional development in Canada are also potentially relevant for the aerospace sector.

The Industrial Regional Benefits (IRB) policy and program was created in 1986, and its purpose is to ensure that Canadian firms can derive benefits from procurements, such as new business or investments in new technologies. The IRB policy provides the framework for using federal defence procurement to leverage long-term industrial and regional development within Canada.
The Industrial Regional Benefits (IRB) policy works in the following way. For each major defence procurement that has IRB requirements, a procurement strategy is developed jointly by the Department of National Defence (DND), Public Works and Government Services Canada (PWGSC), and Industry Canada, with input from the federal Regional Agencies. IRBs are almost always applied on defence procurements over $100 million (Major Crown Projects) and are discretionary below that level of money.

Under the IRB policy, winning contractors are required to make investments in advanced technology sectors of the Canadian economy in an amount equal to the contract value. The investments can either be directly related to the procured item, or they can be indirectly related to it. In effect, IRBs are the Canadian version of industrial participation that is practiced in over 100 countries around the world. Obviously, since the aerospace and defence sectors are high technology sectors, the IRB policy has the potential to affect the development of the aerospace sector within the Ontario region, and it is a way for the federal government to exert its influence over the development of the Canadian aerospace sector on a regional basis.

Industry Canada is responsible for the administration of the IRB policy and program, but it also receives assistance from the Regional Development Agencies. Within the Industrial and Regional Benefits Directorate are a group of IRB managers who deal with the day-to-day operations of this program (www.ic.gc.ca).

Another program that requires a brief mention is the Scientific Research and Experimental Development (SR&ED) program (Doern, 1995). This is a federal refundable tax credit incentive program designed to encourage smaller Canadian
businesses with limited cash flows, and in all sectors, to conduct research and
development (R&D) in Canada that will lead to new, improved, or technologically
advanced products or processes.

The SR&ED tax scheme was established in 1986 and it has since evolved into a
program that delivers billions of dollars annually in tax credits. It is also the product of a
long evolutionary history of investment tax incentives and direct research and
development grant programs (Doern, 1995; McQuillan and Goldsmith, 1976).

Institutions play a big role in the development of the SR&ED tax incentive program.
The core institutions can be conceptualized as an interplay among three realms: (1) policy
mandates and goals; (2) administrative and compliance stages, and requirements; and (3)
ministerial portfolio settings.

Policy mandates and goals refers to the fact that any country’s research and tax regime
has to meet a trio of policy criteria inherent in fiscal policy, revenue collection policies
(including taxpayer rights), and micro-economic and research and development policies.
The administrative and compliance realm refers to the fact that any research and
development tax incentive must work its way through a set of program and service
delivery stages. This also includes all efforts to promote and explain the program to
eligible people. Finally, the realm of ministerial portfolio settings concerns itself with the
fact that the organizational settings for handling the full policy and implementation stages
of the research and development tax incentive can vary considerably. While issues of
space preclude a deeper discussion of these matters, it is important to be conscious of
these institutional realms because no country’s research and development tax incentive
institutional matrix can avoid dealing with, as well as accommodating, these realms (Doern, 1995).

The SR&ED program is the largest single source of federal government support for industrial research and development. Claimants may apply for SR&ED investment tax credits for expenditures such as wages, materials, machinery, equipment, some overhead and SR&ED contracts. The Canada Revenue Agency (CRA) is responsible for administering the SR&ED program, while the Department of Finance is responsible for the legislation that governs it (www.cra-arc.gc.ca/txcrdt/html).

A final program that is important to survey is the previously mentioned program that supports the aerospace sector through Export Development Canada (EDC). EDC is a major player in providing financial solutions for the Canadian aerospace sector; in 2008, EDC has underwritten $5 billion in total business volume in support of Canadian aerospace exports. On average, EDC facilitates between $2.5 and 3.5 billion in aerospace financing on a yearly basis. The main use of EDC financing is to support export sales of aircraft, engines, simulators and parts. EDC expects its 2009 aerospace financing results to remain at the 2008 levels. In addition to offering its direct financing, EDC also provides a number of financing solutions to help Canada’s aerospace exporters compete internationally, including guarantees, lines of credit, equipment financing and note purchase facilities (www.edc.ca).

EDC also provides a significant amount of support to the aerospace sector through its Accounts Receivables Insurance (ARI) program. ARI insures a firm’s receivables, thus providing certainty that the money owed to them by their customers will be converted into cash by their due date. Given the fact that receivables are very often a rather
considerable asset on a firm’s balance sheet, ARI makes it easier for a financial institution to lend against that asset. In 2008, EDC supported more than $1.25 billion in ARI for the aerospace sector. EDC’s ARI is primarily used by direct and indirect suppliers to OEMs (original equipment manufacturers), and MRO (maintenance, repair and overhaul) companies.

A final service that EDC provides is given through its Canada Account. In the past, the Canada Account has played an important part in financing Canada’s aerospace exports. The Canada Account is used when a transaction falls outside the scope of EDC’s Corporate Account, but is determined by the federal government to be in Canada’s national interest. Canada Account transactions are negotiated, executed and administered by EDC, just like its Corporate Account transactions, but the risks are assumed by the federal government. Given the size of some aerospace transactions, usually involving fleet aircraft sales, the Canada Account has, and can be, used to support such transactions (www.edc.ca)

Given the focus of this dissertation on the three main variables as they impact on City of Toronto cluster-related innovation policy, in two cluster case studies, the above inventory of federal and provincial multi-level programs and activities does not provide any kind of actual take-up data by cluster aerospace businesses in these program and activity areas. This was largely because of an inability to access such data. But it is also due to our larger task of mapping the basic program contours of this variable.

However, the interviewees who were questioned about this third framework variable tell us a very useful complementary story about such programs and their coordination challenges.
When our interviewees were asked how effectively, and in what ways, do the three levels of government work together in support of innovation-based, or cluster-based, policies in the City of Toronto a number of very candid responses were received. One interviewee stated that in terms of programs, such as the Strategic Aerospace Defence Initiative, the federal government deliberately bypasses the province and the City and goes directly to firms. The logic here was that it did not wish to get involved with the City of Toronto because if they did do this, they would have to get involved with all the other municipalities across the country. This was something that the federal government was not prepared to do. This interviewee thought that this type of thinking was very short-sighted on the part of the federal government. This person suggested that perhaps the federal government needed to be involved with the City government since Toronto should be considered on a separate basis. After all, Toronto is Canada’s largest city, not some small town. Overall, this individual did not see very much multi-level aerospace governance coordination occurring among the three levels of government with respect to Toronto (Interview 8).

Another individual gave us a similar response. When this person was asked whether or not they saw any multi-level governance structure in the City of Toronto they replied that to achieve such a thing was easier said than done. In his view, “the federal government is just not there.” They are not there in terms of policy development, or coordinating policy development between the three levels of government. There is nothing in terms of industrial development policy, or programming. Instead, in his view the federal government has taken a “business climate” type of approach where they bring down taxes. It is a strategy, but it does not do much in terms of focusing on key things that will
help the municipality, or help the country. There is also, in this person’s view, “a bias at work here as well: the federal government thinks that municipalities do not do anything; they think that municipalities just fix potholes.” It is true that a lot of municipalities do not have the capability of doing what Toronto does. But Toronto has one of the largest Economic Development Departments in Canada, and this enables it to do things that other municipalities cannot do in Canada (Interview 9).

This interviewee also indicated that problems arise for Toronto because of the very nature of its size in relation to some other smaller cities that exist within the province of Ontario. For example, if we are looking to develop any sectors in Ottawa, Ontario, or London, Ontario, we can deal with Ottawa because they have an association called the Ottawa Centre for Research and Innovation (OCRI), or we can deal with London because they too have their own particular organization that deals with such matters. However, once we come to Toronto, and the so-called Greater Toronto Area, the GTA, we are dealing with over twenty municipalities, and each of these municipalities has its own economic development presence.

Moreover, Toronto has a far greater number of associations, and third party organizations, such as the City Summit Alliance, the Toronto Regional Research Alliance (TRRA), and the Greater Toronto Marketing Association (GTMA). Once these associations and third party organizations are “layered” on top of the twenty economic development departments that represent the municipalities, this further complicates the picture and it also contributes to a further problem.

Toronto is unable to actually support the place where the action is because the City has to be fair to all the other municipalities that are out there. Therefore, one is afraid to
deal with a municipal government when one is dealing with a multi-jurisdictional project because people will say that if we do that for Toronto, then Mississauga, Brampton and Peel, for example, will want the same thing done for them. This is the case even though there may be a compelling logic that indicates this is exactly what should be done (Interview 9).

The provincial government, however, is slowly starting to get back into the game of more specific sectoral program development. For a number of years, the previous government under the leadership of Mike Harris had exited the government business support space almost completely. Instead, they opted to bring down corporate tax rates, and they also made some changes to some regulatory instruments, but that was its main focus.

It was not until the current Premier, Dalton McGuinty, assumed power that things started to change. His Liberal Government is developing programming around the issues of innovation and commercialization; however, they are going slowly because they had to rebuild their program capacity given the fact that so much of it had been weakened by the previous government. The City has pushed the province back into the aerospace field, and they also have plans to get more involved with biotechnology and ICT. A lot of the focus now is on how to pull commercialization out of the research community (Interview 9).

Another issue that was stressed by many interviewees centred on the view that the City of Toronto as a mega-city needed to be treated differently. This does not mean just the City of Toronto itself, but also the so-called Greater Toronto Area (GTA). The logic of this is clear: it only makes sense for the GTA to work together collectively so that we
do not end up with the kind of policy and program fragmentation that currently exists. Then the City needs to target whatever it is doing at the appropriate focus or location. Our interviewees suggested that some sort of regional economic development entity needs to be created that will address this situation (Interview 9).

The Government of Canada has since created a new federal economic development agency called The Federal Economic Development Agency for Southern Ontario (FedDev Ontario) and hence is much broader than even a Toronto mega-city. The aim and objective of FedDev Ontario is to help Southern Ontario communities and businesses to become more competitive, innovative and productive (http://southernontario.gc.ca). On August 13, 2009, Prime Minister Stephen Harper formally launched FedDev Ontario.

FedDev Ontario has a number of programs; however, the Southern Ontario Development Program (SODP) was established as the core program. Funding under this program will go towards projects that “can stimulate local economies and enhance the growth and competitiveness of local businesses and communities.” Over $100 million has been allocated to the SODP for the fiscal year 2009-2010, and this money will be spent in the following manner:

- $63 million will be spent through a general intake process;
- $20 million will be spent on an intake for the food and beverage processing sector;
- $15.75 million will go towards the Canadian Manufacturers and Exporters’ (CME) SMART Program. The SMART Program will help small-and-medium-sized manufacturers increase their productivity in the global economy;
- $1.6 million will be spent on the Ontario Chamber of Commerce Export Market Access Program. This program will help southern Ontario businesses that want to increase their sales internationally (http://southernontario.gc.ca).

Another interviewee offered up the observation that the federal government did not really have any strategic approach to say that it would develop a cluster here or there.
Any policies that are developed are developed on a national scale. There would have to be a change in thinking for the federal government to look at developing clusters within a specific region. This is especially the case with the current federal government. This current federal government thinks that “the market has to do it on its own” (Interview 10). For example, there was not a lot of federal participation with the development of the Flight Path strategy by the City of Toronto (Interview 10). This was unfortunate since this document went on to become the principal document for the development of the current aerospace strategy for the province of Ontario (Interview 9).

As all of the above interview data clearly indicates, our respondents think that there are real problems with any multi-level governance approach to innovation and cluster policy making. While many programs exist many of these programs can only be accessed by firms directly or by other third party organizations.

Clearly, there is a lot of work that is needed for the coordination of efforts of the three levels of government. As it stands now, there appears to be too many policy silos; so there is a lot of room for improvement. At the federal level, they have made it very clear that they are not in the business of subsidizing industry (Interview 2). The City’s view is that this money is an industry investment in the sector, and it is one that is urgently needed if the aerospace sector is to grow and thrive in Toronto. The development of the aerospace sector in Toronto has a one hundred year history. Since the City of Toronto is at the forefront of the development of the knowledge-based economy, and since a great deal of what is made in the aerospace sector is exported, all of this strongly suggests that the aerospace sector should be supported by the federal government. Investments here are
vital; other federal governments in other countries support their aerospace sector (Interview 2).

CONCLUSIONS

This chapter has analyzed the first case study, the aerospace cluster. The research framework has been utilized to examine the aerospace case study by looking at the framework variables of leadership, local government finance and multi-level governance programs and activities. Having looked at our primary documents and analyzed our interviews several interesting overall conclusions emerge.

With respect to leadership, the analysis of key documents showed that leadership was evident in various ways from the Mayor, city council, and the city bureaucracy, depending upon the timing and content of the main reports examined. But it is important to stress that discourse and content of leadership varied considerably. Cluster policy was certainly mentioned, but it was also often embedded in other larger policy discourse such as economic development, competitiveness, and older fashioned but still used industrial sector policies.

When our interviewees were asked how important leadership was in all of its forms, political, civic, and entrepreneurial, for the development of a cluster-related innovation policy, two important points emerged. First, all of the interviewees agreed that leadership is one of the most important variables for policy success and that, in particular, leadership of the Mayor, the bureaucracy and City Council are crucial. However, as we have seen, this type of leadership is only periodically present rather than being sustained.

However, even though municipal political leadership, in all of its forms, is critical to the success of establishing cluster-related innovation, what happens at the level of
industry leadership is equally essential. At the industry level, it is very important that far
greater leadership is forthcoming from industry than has often been the case. One has to
understand that the maturity of that leadership is critical, and regrettably that is something
that cannot be bred. It is a long evolutionary process.

The analysis of the local government finance variable also produced some equally
compelling results. Looking at the Tables which were developed from the City budgets, it
is very clear that the City is not spending enough money on economic development in
general to be capable of developing a cluster-related innovation policy to really be a
serious player. For years funding for economic development grew very slowly, and this
no doubt affected the amount of money that could be used to develop cluster policy and
clusters. The amounts per cluster are tiny and ineffective. This also reflects the thinking
of our interviewees who indicated that the amount of money that is being spent on cluster
development is inadequate

The analysis of the third and final variable, multi-level governance programs and
activities, also produced some thought-provoking responses. As all of the interview data
clearly indicates, our respondents think that there are real problems with any multi-level
governance approach to policy making. While many potential aerospace cluster
development programs and activities exist, many of these programs can only be accessed
directly by firms or by other third party organizations. Clearly, there is a lot of work that
is needed for the coordination of efforts of the three levels of government. As it stands
now, there appears to be too many policy silos; so there is a lot of room for improvement.
At the federal level, they have made it clear that they are not in the business of
subsidizing industry. The City’s view, however, is that this money is an industry
investment in the sector and it is one that is urgently needed if the aerospace sector is to
grow and thrive in Toronto. While programs such as SADI are a beginning, the City
needs access to more direct money and programs by the other levels of government.
Chapter 6

CASE STUDY OF THE TORONTO FASHION CLUSTER

INTRODUCTION

The purpose of this chapter is to develop a focused empirical analysis of our second case study, the Toronto Fashion Cluster. Chapter 4 has looked at the origins and evolution of the precursor industry over its one hundred year history, where it was referred to variously as the garment, apparel, clothing and also the textile industry. Chapter 4 also showed how the City of Toronto had created organizations such as the Garment Industry Liaison Committee (GILC) and the Fashion Industry Liaison Committee (FILC) to strengthen economic development institutions.

The focus of chapter 6, however, emphasizes the fact that today the development of the apparel/fashion sector takes place through cluster-related innovation policy and related economic development as outlined below in the City’s key policy documents.

This chapter analyzes the fashion case study by looking at the three analytical framework variables of leadership, local government finance and multi-level governance programs and activities. The analysis of the leadership variable draws on leadership reports and interviews that shed light on leadership from several sources. The analysis of the local government finance variable while making reference to all of the key aspects of city budgets, as well as well as the key tables from chapter 5, focuses mainly on the views and insights of the interviewees. Finally, the analysis of the third framework variable, multi-level governance programs and activities, looks first at key program descriptions and characteristics, which are then also supplemented with interviewees’
views on the fashion cluster features of these programs. The focal point of this analysis, as in the aerospace analysis in Chapter 5, is on how cluster-related innovation policy has changed over the last twelve years. Conclusions then follow.

Table 6.1 below guides and previews the narrative and the analysis with further details including interview findings and views provided as the chapter proceeds. Inevitably, the chapter begins to make some initial comparative points between the two cluster case studies, but on the whole we leave this key analytical task to Chapter 7. Some of the main features of City Council reports are noted only briefly in this fashion cluster case study because they have already been discussed in Chapter 5 and need not be fully repeated here.

**LEADERSHIP**

As indicated in our earlier discussion of the research methodology, the examination of the leadership variable will draw on interweaving sources which in this section we refer to as leadership revealed in key reports. Interviews also shed related light on leadership overall, highlighting leadership from several sources, political, bureaucratic, industrial, and academic/universities.

As was the case with the aerospace cluster interviews, when the fashion cluster interviewees were asked how important leadership was in all of its forms, political, civic and entrepreneurial, for the development of a cluster-related innovation policy, two prominent points again emerged. First, all agreed that leadership is one of the most important variables if cluster-related innovation policy is to have any chance of being successful.
Political leadership is seen as being critical both to develop relationships and ties with the local government, and also to drive that engagement up to the level of the federal and

Table 6.1  Key Variable Findings for the Fashion Cluster

**Leadership**

- Toronto City Council
  - Lead role in developing *The Toronto Economic Development Strategy*
- Mayor
  - Lead role in developing the *Agenda For Prosperity*
- City Bureaucracy
  - Lead role in formulating the strategy for *The Toronto Economic Development Strategy*
- Political
  - Political leadership at municipal level seen as important for the success of cluster-related innovation policy development
- Entrepreneurial
  - Interviewees divided over whether entrepreneurial leadership is more important than political leadership for success of cluster-related innovation policy
- Civic
  - There is little or no civic leadership within the fashion sector, but it is needed. Why? A concern expressed that fashion cluster policy development not linked to broader social networks

**Local Government Finance**

- City Operating Budget Increases
  1998-2004: $1billion
  2004-2006: $1billion
  2004-2008: $1.6 billion
  Total Increase for Decade: $2.6 billion

- Economic Development Budget Increases
  1998-2004: $351,000
  2004-2006: $225,000
  2004-2008: $1,637,000
  Total Increase for Decade: $2,213,910

- Budgets for cluster policy development
  $30,000

**Multi-level Governance Programs and Activities**

- Federal Programs
  Three direct programs: CATIP, GOA, ICCI
  No indirect programs
- Provincial Programs
  No direct or indirect programs
provincial government and then beyond that to the level of businesses, universities and community colleges. If the appropriate level of sustained leadership is missing, then one does not get the local government on board. And if the support of the local government does not exist, then one cannot mobilize the federal or provincial government nearly as effectively because one does not have enough MPs to drive and communicate local concerns to those top two tiers of government. The local government acts as an essential catalyst in this respect, but interviewees continuously linked this to the political leadership and support of all three levels of government.

Not surprisingly, the process by which policy is developed is not in an overall sense basically different for the fashion cluster than for the aerospace cluster. The Mayor sets the stage by pushing the agenda along and championing the cause, but does not control a majority of votes on City Council. Therefore, the Mayor has to fashion a majority in order to see his policy ideas along with other initiatives at City Council come to fruition. After the Mayor has done all that can be done it is up to the bureaucracy to develop the specific details of the strategy. It is the top-level senior bureaucrats who develop the strategy for achieving the desired goals and objectives of a given initiative. Finally, as was the case with the aerospace cluster, the leadership that comes from City Council is also critical: they are the ultimate legislative body in local government.

Since we are again dealing with most of the same core documents that were analyzed for the first case study on aerospace, it will be recalled that in October 1998, City Council endorsed and then recommended that an Economic Development Strategy Steering Committee be created. This committee was given the task of developing an economic development strategy for the City of Toronto, given the previously analyzed changes in
governmental structure that had taken place when the City of Toronto amalgamated on January 1, 1998 creating a mega-city.

Again as in Chapter 5, it is important to reiterate in the story of the fashion cluster all of the subsequent key players and stages including City Councillor Brian Ashton’s primary leadership role in developing support for the creation of the Economic Development Committee; the City Council’s role in driving the Economic Development Committee to produce the new economic development strategy, including the initial competitiveness study; and the eventual economic development strategy document entitled *Toronto Economic Development Strategy*, which finally appeared on July 12, 2000.

As noted in Chapter 5, *Toronto’s Economic Development Strategy* report stressed that clusters should be seen as the building blocks of a regional economy, but also that Toronto’s clusters exceed the boundaries of the City of Toronto to include the rest of the Toronto city-region (*Toronto Economic Development Strategy*, 2000:25). Therefore, what has been established, once again, with this second case study analysis of key documents is that leadership for this initiative also came from Toronto City Council, including its role in developing and agreeing on the City Council’s *Corporate Strategic Plan*.

**The Creation of the Apparel Industry Development Council**

It needs to be noted that in the twelve-year period that is being examined for the fashion cluster, different committees, not surprisingly, were established for the fashion cluster than was the case for the aerospace cluster. For example, the fashion cluster does not have an equivalent of the Aerospace Action Partnership (AAP) examined in Chapter
5. The fashion industry differs in one major respect from that of the aerospace industry when it comes to its affiliation with economic development within the City of Toronto. Prior to the 1990s, one would never find any reference to the aerospace industry in the City’s economic development plans because at that time this simply was not a part of the City’s economic thinking. Any benefits that accrued to the City’s aerospace firms during this time period were seen to be coming from policies which were pursued by either the federal or provincial government.

However, the same thing cannot be said about the fashion sector. The City had sector development officers who were dealing with problems in the garment industry in the early 1980s. Given this fact it is not surprising then that there is one new development which does merit further attention in this chapter and that is the establishment of the Apparel Industry Development Council (AIDC). There are two reasons for this further extended analysis. First, this new development was an outgrowth of the earlier Fashion Industry Human Resources Adjustment Committee (FIHRAC) and second, the emergence of the AIDC as a new organization occurred during the time period that is being analyzed in this thesis.

By 1996 the garment industry faced a looming skills shortage that could affect the ability of the industry to compete in the global economy. Therefore, in 1996, the Fashion Industry Liaison Committee (FILC) along with a group of Toronto’s apparel industry stakeholders created the above mentioned FIHRAC. Its mandate was to spearhead training and skills development initiatives for the garment industry.

Unfortunately, this organization was plagued by problems almost immediately as it lacked both the on-going leadership as well as the capacity, mandate and resources to
address the technology and workforce needs of the garment industry. As a result of the difficulties the work of FIHRAC was finally discontinued in 2003.

However, even though FIHRAC no longer existed this did not mean that the problems which brought about the creation of this organization in the first place had been solved. On the contrary these problems grew in magnitude over time. Finally, on February 13, 2003, a new organization called the Apparel Industry Development Council (AIDC) was created with a mandate that was very similar to that of FIHRAC (City of Toronto, Economic Development, Confidential Letter, January 5, 2010).

AIDC was created as a non-profit corporation that was established to assist apparel product industries in the province of Ontario so that they could compete in an increasingly global marketplace. The mandate of the AIDC is to develop a broad program of relevant industry training courses as well as to strengthen human capital through business supports.

This mandate is manifested by the involvement of community and other public agencies, industry associations and other sector groups, community colleges and individual firms. These partnerships and networks allowed manufacturing firms to have better access to business development services (Apparel Industry Development Council, 2006:1).

The AIDC has produced a number of training initiatives in 2004 and 2005 which dealt with product costing, supervisory skills training, and stitch and seam garment construction. And in 2006, AIDC developed a manufacturing quality circle network and lab benchmarking program. These initiatives were additions to other, more established
programs, such as sample making and English-as-a-Second-Language that already existed under the FIHRAC mandate (Apparel Industry Development Council, 2006:2).

All of these measures have helped to grow the fashion cluster because the end result has supposedly been better jobs and a more highly skilled worker within the garment industry. In so doing they have built on the insights contained within Toronto’s Economic Development Strategy report. The AIDC is still in existence, at least on paper, even though this organization has not met formally as a group in quite awhile.

But even though the AIDC tried to apply the valuable lessons contained within Toronto’s economic development strategy, it has not engaged in the kind of things that organizations within the aerospace sector have done. As noted above, there is not any equivalent of the more concerted Aerospace Action Partnership (AAP) within the fashion cluster. Neither has any organization within the City bothered to conduct a strategic management exercise; nor has any such organization been created to develop a long-range document like Flight Path to chart a strategic course for a cluster-innovation policy, or to develop a cluster in the future. There also seems to be a distinct lack of critical linkages, as well as networks, which were clearly more prevalent when viewed through the lens of the aerospace cluster.

**The Agenda for Prosperity Document**

We again need to refer, albeit briefly, to the second leadership document that deals with cluster policy and cluster development namely the Agenda for Prosperity. As shown in Chapter 5, in June 2006, Mayor David Miller established the Mayor’s Economic Competitiveness Advisory Committee. The committee was given the mandate of helping to forge a culture of partnership that was seen as essential to achieving sustainable
economic growth. Mayor David Miller Chaired this Committee which included representatives from the worlds of business, labour, and academia, as well as the Chair of the Economic Development Committee, the Chair of the Budget Advisory Committee and two councilors-at-large (Agenda for Prosperity, 2008:6).

As was the case in the aerospace narrative, this document was the subject of a great deal of criticism. The critics on City Council, and in the economic development field in general, claimed that it was too broad-based a document to be effective. More importantly, however, this document did nothing to build upon the previous economic development strategy that appeared in July 2000. People who were committed to, and worked in, the economic development field were hoping to see how the cluster concept and cluster-related innovation policy could be taken to another more sophisticated level within the City.

However, as important as municipal political leadership is to the success of establishing a cluster policy and a cluster, people who were interviewed for this second case study also indicated that what happens at the level of entrepreneurial leadership is equally important. A great many of the interviewees who were interviewed for the fashion cluster thought that it was critically important that greater leadership is forthcoming from industry than has been the case in the past. In the case of the fashion cluster this is not an easy thing to achieve since so many of these firms are very small, highly entrepreneurial and fiercely independent entities. It appears that based upon its past history collaboration is still not an easy thing to achieve within the garment/fashion industry.
That said, interviewees for the leadership variable were divided in their opinions over which variable predominates: political leadership or industry leadership. A certain group of interviewees thought that political leadership at the City level was key because it brings out the profile of the industry and then there is more access to the budget. Another interviewee indicated that Mayor Miller has attended some of the fashion breakfasts that are sponsored by the Toronto Fashion Incubator (TFI), thus further raising the profile of the industry at the political level.

The counter-argument to all of the above is that entrepreneurial, or business, leadership predominates over that of political leadership. There were quite a number of interviewees who thought that it is only when politicians see business people truly engaged in a particular problem that they realize its significance and start to become engaged in the same problem themselves. It seems that politicians want a constituency before they will enter the debate and that is why entrepreneurial support is so critical.

A big part of the problem today, however, is that industry leadership, or entrepreneurial leadership, is deficient in both quantity and quality. This was not always the case, though it is hard to judge overall. According to some of our interviewees, there have been periods of time in the past when the fashion sector has had very able industry leadership. The fashion designer Brian Bailey has played a big leadership role in helping the industry to develop in Ontario and in Canada. Another fashion designer, Franco Mirabelli, also played that role for a couple of years in Toronto.

All of this was done without having the benefit of a strong locally organized association which could speak with one voice about the issues facing the fashion sector. At the present time there are not any fashion designers filling that role. The Fashion
Design Council of Canada (FDCC) under the direction of Robin Kay seeks to fill that role, but according to some of our interviewees she is using her leadership role to address a different set of concerns from that of her predecessors. Rather than being concerned with issues that seek to develop the whole cluster, such as education and mentoring of promising talent, her principal focus seems to be on the twice-yearly production of L’Oreal Fashion Week.

These events showcase Toronto fashion designers who are already established, but who still need events like L’Oreal to further enhance their careers and develop their fashion labels. It now seems that issues of education and mentoring of new talent have devolved to organizations such as the Toronto Fashion Incubator (TFI), an organization whose mandate is to support and nurture small business entrepreneurs. It is precisely because of these impressions that a few of the interviewees indicated that they would prefer to see a new local association existing in Toronto that could address specific issues facing the fashion cluster.

But if the lack of leadership at the industry level is problematic, the lack of civic entrepreneurship is also a matter of concern for the fashion cluster. The results for this aspect of the leadership variable were unexpected. Many of the interviewees agreed that any of the people who are in a position to lead fashion cluster-related innovation policy development have not linked it to broader social networks such as the Toronto City Summit Alliance, an organization which has experienced its own important development and evolution.

As late as the early 2000s, there were few instances of civic leadership in the City of Toronto. The creation of the Toronto City Summit Alliance (TCSA) in 2002 was an
attempt to correct this situation. The original City Summit was held in June 2002, and it lasted for a day. After the Summit was over, a coalition of more than forty civic leaders, coming from the private, public, labour, and voluntary sectors came together to form the Toronto City Summit Alliance. David Pecaut was the driving force, and founding chair, of this organization. The purpose of the TCSA is “to bring together civic leaders from all different sectors to discuss issues affecting the [Toronto] city-region, identify areas that need attention, and to incubate, develop and launch new programs” (Bramwell and Wolfe, 2011; http://www.civicaction.ca/about.php?nid=72).

Following the untimely death of David Pecaut in 2009, and after a period of internal re-organization, in December 2010, the Toronto City Summit Alliance was renamed the Greater Toronto Civic Action Alliance, Civic Action for short. It was felt that this new name better reflects what they do best: “bringing together action-oriented civic leaders from throughout the Toronto region…to tackle complex issues” (http://www.civicaction.ca/about.php?nid=9).

The interviewees also agreed that the people in charge of creating fashion cluster-related innovation policy do not define issues that arise in fashion in terms of broader policy issues. Establishing this link is important since it could facilitate the development of the fashion cluster.

In the end, all of the interviewees who were knowledgeable about such matters agreed that there is little or no civic entrepreneurship within the fashion cluster. Most agreed that it would be very beneficial to have such leaders working for the overall benefit of the cluster, so that issues that arise in the fashion cluster could be linked to broader policy issues and larger social networks. Therefore, most people agreed that the development of
civic entrepreneurship has to occur because the fashion world does not have great public civic leaders.

However, as critical to the success of the cluster as all of these strands of leadership are, political, civic and entrepreneurial, ultimately there has to be a blending of shared leadership, and mentorship, for it to be successful. In certain ways, these limitations, which are found within the fashion sector itself, can also be viewed as impediments to the further development of the cluster.

As important as all of the above insights are for the discussion of the leadership variable, there were several other views that our interviewees expressed that are worthy of inclusion. For example, one person who was interviewed did not think that there was any leadership, political, civic or entrepreneurial, coming from the fashion cluster. This individual thought that all of the potential leaders within this industry have different needs and priorities. They are not united; they are fractious and they are highly competitive people. However, if leadership were to exist, entrepreneurial leadership would need to predominate over both civic and political leadership.

Yet another interviewee thought that for all of the good work that the Canadian Apparel Federation (CAF) does in the area of trade policy, they were still not doing enough to try and bring the apparel/fashion cluster any further together. This is not an easy thing to do given the secrecy, competitiveness and fractious nature of this industry, but this individual thought that an attempt should be made to try and develop closer ties within the industry.

But this may not be an easy thing to achieve given the secrecy that is such a part of this industry. Where did this secrecy come from? Part of the answer can be found by
looking back to the historical development of this industry, and another part of the answer can be found by understanding the organizational culture of the fashion world. Chapter 4’s account of the history of the garment industry clearly indicated that a measure of industrial stability was needed so that the clothing industry could thrive in the years ahead. One of the factors that helped to fuel this instability even more was the highly competitive nature of this business. This competitiveness was a by-product of the entrepreneurial culture that developed this industry from its inception, since many of the Jewish workers were attracted to this industry because the expectation was that one could become a small manufacturer without having to invest much capital (Frager, 1992:17).

The competitive nature of this business continues to the present day. As one interviewee stated: “This industry is so competitive and protects itself so jealously that sharing of ideas is very, very difficult.” This interviewee then gave a concrete example to further illustrate this point. This individual organized a dinner with a competitor, and the one question that everyone kept asking was this: How can you even consider doing something like this with your competitor when they are the enemy? After the dinner was over the interviewee said: “They could not understand the concept of us getting together to create something of value.”

Another interviewee tried to justify this industry secrecy by drawing a distinction between the fashion industry and other industries. As this individual stated: “In the fashion world it’s not like you are Boeing and you build airplanes, and if someone knocks-off something you take them to court. In this world your life is wrapped up in the next season’s collection.” Therefore, secrecy has to predominate. In the competitive jungle that is the fashion world, if it does not, a designer/manufacturer may find that
another designer has used one of his or her ideas. What these two examples clearly illustrate is that should the CAF eventually desire to try and bring the apparel/fashion cluster closer together, it will face a formidable challenge in dealing with the secrecy and competitiveness that forms such a part of this industry.

Finally, this same interviewee was even more critical of the issue of political leadership as it pertained to the issue of training funds. This individual thought there was not enough support coming from the provincial government over the issue of training funds for garment workers. Key leaders within the garment industry observed that requests for training funds met with a weak response on the part of the government.

LOCAL GOVERNMENT FINANCE

We now look at the local government finance variable, mainly the finances of the City of Toronto. All of the key aspects of city budgets, including the underlying strictures of property tax revenue, and all of the key tables from Chapter 5’s account of the limited amounts, and often confusing structure, of city budgets as they effect economic development and funds available per cluster on average are relevant here.

When the interviewees who were knowledgeable about the subject were asked how much money goes directly into the fashion cluster for cluster development, the figure which emerged again and again was between $30,000 to $35,000 a year (Interview 11). The higher figure would indicate an increase in the overall budget that came after City Council’s 2008 review. Any interviews that were conducted after this date would probably see the interviewee quoting the higher figure.

That being said, an interesting development occurred when this question was posed to our interviewees. Many of the people had absolutely no idea of how much money went
into the development of the fashion cluster. And many of the designer/manufacturers who were interviewed did not even know that the City had a purported cluster-related innovation policy in the first place. There is obviously a communication gap that exists between the fashion community and the policy makers at Toronto City Hall.

This central concern with funding clusters, and funding per cluster, brings us to the related issue concerning the relationship between the City and Toronto Economic Development Corporation (TEDCO), discussed in earlier chapters, as well as the relationship that exists between TEDCO and the Toronto Fashion Incubator (TFI).

The Toronto Economic Development Corporation (TEDCO) is the primary redevelopment corporation for the City of Toronto. TEDCO is a corporation that is designed to function as a self-financing, arms-length, private company. It is wholly owned by its sole shareholder which is the City of Toronto. TEDCO was incorporated in 1986 and it is governed by a Board of Directors.

TEDCO’s core function is to bring about urban development, and this is achieved through the integrated activities of real estate. These activities include property development, property leasing, and economic development initiatives that involve supporting sector-specific business incubators (City of Toronto, TEDCO Corporate Plan 2008-2010: 21). TEDCO provides financial and administrative assistance to three incubators one of which is the Toronto Fashion Incubator (TFI).

For example, in 2007 the TFI was forced to relocate from one location in the city to another due to high rents. TEDCO retained some real estate consultants to help them find a new location. The TFI was successful in relocating to the Exhibition Place grounds, which is on land that is owned by the City of Toronto. Unfortunately, the new space was
a much smaller office space than they were used to having, so TEDCO provided further assistance to the TFI when it submitted an application to the Trillium Foundation for additional money. The application process was successful for the TFI, and TEDCO was therefore successful in leveraging $150,000 for the TFI thus allowing it to expand its program space at its new location.

The Toronto Fashion Incubator (TFI) is an innovative, non-profit organization, whose mandate is to support and nurture small business entrepreneurs. The TFI plays an important role in the growth and promotion of the Toronto, and Canadian, fashion industry by helping entrepreneurs to develop the business and professional skills they need to survive and be successful in this industry.

The TFI has the distinction of being the first official “fashion incubator” in the world. TFI was incorporated in 1987 and began in 1988 as the Toronto Centre for the Promotion of Fashion Design. In December 1989, the centre was granted official incubator status through an Order-in-Council by the Ministry of Municipal Affairs. A further development occurred in February 1990 when an operating grant, along with administrative support, was provided by TEDCO through its business incubation program (www.fashionincubator.com).

All of the above leads us to the very important question of what other funds the City can access for cluster development. Clearly, TEDCO does have a role to play. But there are really two separate sources of funding: there is the source of money that the Economic Development Division of the City receives from the City budget, and there is money which TEDCO provides to the TFI. TEDCO provides financial assistance to the TFI and this supports the fashion cluster. Unfortunately, TEDCO is not at liberty to
disclose just how much money is given to the TFI each year. However, what can be stated is that the TFI does receive a grant from TEDCO once a year. This grant program is rather substantial given the fact that the official who was interviewed at TEDCO stated that “without TEDCO, I doubt that the TFI would have celebrated its twentieth anniversary this past year. TEDCO was instrumental in providing financing to enable this important organization to continue its great work.” According to this official, TEDCO’s role has been to help advance the *Agenda for Prosperity*. What TEDCO does as an organization is to provide assistance to advance that cluster policy. This is done in different ways and one of the ways is by supporting business incubation in general and fashion incubation in particular.

Another key point that emerged from the interviews was again, as in aerospace, the comparison of cluster development in Toronto to that of Montreal. Several of our interviewees pointed out, once again, just how focused the City of Montreal is on its economic development strategy based on clusters as opposed to Toronto. This was especially the case when it came to Montreal’s relationship to its fashion cluster. In the mind of the French Canadians fashion is an art and it is a part of the overall Quebec culture. As such it is to be nurtured and respected.

The Quebec government is aware of this sector’s economic importance, and it desires to give the industry the necessary support it needs to maintain its reputation as a winning industry. To that end, the Quebec government has developed a five-point Quebec fashion and clothing industry strategy known as PRO MODE. This strategy was created in 2007 and at that time the Quebec government indicated that it would fund this strategy for at least three years.
The centrepiece of this strategy is the $82 million that has been earmarked for this industry, $40 million of which will be used to fund the development of design and advanced technologies. The remainder of the money will be used to fund various other government investments ranging from the development of business models to new worker training measures (PRO MODE, 2007:4). Of course, as was the case with the aerospace cluster, $2 million of this money will be used for specific cluster development, since each cluster in Quebec receives $2 million for development purposes.

Having a level of government that is willing to support economic development, and specifically cluster development, in this manner produces a number of distinct advantages for the City of Montreal that the City of Toronto simply lacks. This kind of initiative helps to create a real vehicle for collaboration with other social actors and policy actors; this kind of collaboration is something that is essential to the formation of any cluster-related innovation policy or cluster development.

But if Toronto only has $35,000 to spend on its fashion cluster initiatives compared to Montreal’s $2 million for the same concerns, it is obvious that Montreal will have the opportunity to build a much bigger and better cluster program and cluster policy. This allows the City of Montreal to have the ability to work with their fashion cluster and industry and mould it in ways for the good that is impossible for the City of Toronto to be able to do.

However, the City of Toronto is simply not spending enough money to be able to develop a serious cluster-related innovation policy and program to match that of Montreal. Some of the reasons why the City has spent so little on economic development
in general are easily spotted in the budget tables presented in Chapter 5, but again relevant here.

MULTI-LEVEL GOVERNANCE PROGRAMS AND ACTIVITIES

The third framework variable relates to multi-level governance programs and related activities provided by the federal and provincial governments. The key programs are first described and broadly characterized, then related, where possible, to interviewee’s views about the innovation and fashion cluster features of these programs, as well as to whether or not there is adequate multi-level coordination evident or effectively in place. Again, it must be stressed that the analysis does not assess the take up details of these programs and related activities by the City of Toronto or by other cluster participants. In part this is because of inadequate data and access, but also because of the larger purposes of the thesis that are centred on mapping some of the key overall city-level focused aspects of cluster-related innovation policy.

The only way that the City of Toronto can obtain the necessary resources to be able to fully develop a cluster-related innovation policy is by embracing the multi-level governance approach to policy making. If this approach existed it would allow the City to partake of the various programs and activities that these other levels of government possess and thus lever its own finances as previously examined.

As was the case with the aerospace cluster study, this section is also divided into two main parts. The first part describes and characterizes the various programs which are available to the City and to companies from the provincial and federal governments. The second part delineates the findings obtained from the interview data.
Compared to the numerous programs that were described in our first case study on aerospace there is a dearth of programs available for the development of the fashion cluster. The paucity of such programs will be readily discernable as each level of government programs is analyzed.

**Federal Programs**

There are only three federal programs that are relevant to the fashion cluster: (1) The Canadian Apparel and Textile Industries Program (CATIP), (2) The Program for Export Market Development (PEMD) now known as Global Opportunities for Associations (GOA), and (3) The Community Investment Support Program (CISP), now known as Invest Canada Community Initiatives (ICCI). Each is profiled briefly.

The Canadian Apparel and Textile Industries Program (CATIP) was introduced in 2002. The purpose of this program was to assist apparel and textile firms to diversify their markets and increase their competitiveness, thereby helping these firms adjust to the significant trade and market changes that had taken place over the past number of years.

CATIP consisted of two major divisions and four components: there was a firm component and a national initiative component. Any money that was given out through the national initiative went to industry associations. Both firm and association monies were given out by the federal government through a contribution program. In 2004 and 2005 additional funding was provided for the second major division of this program, the Canadian Textiles Program (CANTEX) component of CATIP.

CATIP was delivered jointly by Industry Canada (IC) and Economic Development for the Quebec Regions (CED-Q). CED-Q was responsible for the firm level projects in Quebec, and Industry Canada was responsible for firm projects in the rest of Canada, as
well as all of the national initiatives (http://www.ic.gc.ca/cic/site/ae-
ve.nsf/eng/03118.html).

The aims and objectives, as well as the nature of the projects, funded under CATIP changed over time. However, in the beginning funding was provided under CATIP to attain the three objectives set out below.

The first objective was to identify and introduce best practices and leading-edge technologies. In this case firms used the contribution money to undertake evaluations of their operations. Once this was finished these firms then introduced their best practices in design, technology, management, administration and production, as well as numerous other areas related to the firm’s operations. A contribution was also given to an industry association so that a technology centre could be developed which would promote the adoption of leading-edge technologies and innovations by apparel firms.

A second objective was to facilitate access to capital. Money was made available to firms, via contributions, to develop business plans as well as to undertake market and sector analysis investigations. IC used money from internal funding (Operations and Maintenance, hereinafter referred to as O&M) to contract market and sector analysis of a wide variety of topics including a global yearly review of emerging trans-national apparel and textile firms, a study of international apparel and textile lending practices, the development of certain financial analysis tools, as well as for the development of communication campaigns that were targeted towards financial institutions and investors.

The third and final objective was to develop and implement global marketing strategies. Money in the form of contributions was made available to associations so that they could undertake marketing and branding campaigns, both domestically and
internationally. Once again, O&M funds were used to support firms that participated in trade shows. This was achieved by ensuring that an appropriate amount of booth space was made available to these firms, and also by making sure that the presence of Canadian firms was highlighted (http://www.ic.gc.ca/eic/site/ae-ve.nsf/eng/03118.html).

CATIP consisted of two major divisions and four components, two of which (the firm and national initiatives components) are of interest to both apparel and textile firms. The other major component, CANTEX 1-Productivity and CANTEX II- Transformative, were specifically designed to meet textile firm’s needs.

The firm components for the apparel sector were funded only from 2002 until March 2005. Table 6.2 below highlights the main features of the CATIP components.

<table>
<thead>
<tr>
<th>Table 6.2 CATIP Components</th>
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<tbody>
<tr>
<td>Component</td>
<td>Client Type of projects</td>
</tr>
<tr>
<td>1. Firm</td>
<td>Canadian apparel and textile manufacturing firms</td>
</tr>
<tr>
<td>2. National Initiatives</td>
<td>Apparel and textile industry associations</td>
</tr>
<tr>
<td></td>
<td>Not-for-profit organizations</td>
</tr>
</tbody>
</table>

Source: http://www.ic.gc.ca/eic/site/ae-ve.nsf/eng/03118.html

Firms were eligible to claim up to 50 per cent of the costs of a project; however, the maximum non-repayable contribution that could be claimed was $100,000 per project.
Aboriginal firms we allowed to claim one hundred per cent of their expenses. The National Initiatives component allowed associations and not-for-profit organizations the ability to write off 90 per cent of a project’s costs provided that these costs did not exceed $3 million.

Further changes were made to CATIP in 2005 as part of an overall restructuring which saw the development of new measures that included tariff relief on textile inputs as well as the extension of duty remission orders. Changes were also made to the definition of eligible costs. The definition was expanded to include equipment and machinery costs that were directly related to re-tooling projects. Marketing costs were also included for the first time, provided that they did not exceed 20 per cent of the total cost of any given project. In addition to all of the above, the maximum contribution was increased to $3 million, but contributions in excess of $100,000 continued to be repayable, including contributions for capital costs (http://www.ic.gc.ca/cic/site/ae-ve.nsf/eng/03118.html).

The program resources which were set aside by both Industry Canada and CED-Q for the delivery of this program between 2002 and 2010 were over $84 million. There was one major change to the program in 2006 when the federal government announced it was reducing the amount of money it put into this program by $24.9 million effective immediately for the years 2006 to 2008.

Resources were allocated for this program in the following manner: since $84.86 million was available for this program, approximately $70.5 million, or 83 per cent, was used to support recipients’ projects while the balance was to be used for the administration of the program by IC and CED-Q. This included over 55 projects that were funded using O&M between the years 2003 and 2005. By August 2009,
approximately 850 projects had either been completed, or authorized, through contribution agreements to over 444 individual organizations (http://www.ic.gc.ca/eic/site/ae-ve.nsf/eng/03118.html).

CATIP was terminated as a program on March 31, 2010. However, interviews with industry representatives suggest a serious need exists for continuing federal government support of the apparel and textile industries. While CATIP may have alleviated some of the pressures on the apparel sector which were bought about due to significant trade liberalization, there are still ongoing pressures on both the apparel and textile sectors that require additional support. A return to this point will be made in Chapter 8 (http://www.ic.gc.ca/eic/site/ae-ve.nsf/eng/03121html).

The next program that needs to be analyzed is the Program for Export Market Development (PEMD) which is now called Global Opportunities for Associations (GOA). A brief overview of PEMD will precede the development of the GOA so that historical context can be better appreciated.

The Program for Export Market Development has been an important part of the Government of Canada’s international development strategy since 1971. PEMD consisted of two separate and distinct parts: there was PEMD-Industry and PEMD-Associations. The purpose of PEMD-Industry was to assist smaller firms that were new to exporting, along with firms that were getting ready to expand into new markets. This assistance was made available through national sector-wide trade associations. PEMD-Industry consisted of three major components: there was the Market Development Strategy (MDS), New to Exporting Companies (NEC), and Capital Project Bidding (CPB). MDS provided assistance to firms that needed to develop new marketing strategies. NEC
provided guidance to firms that were new to exporting, and CPB supported Canadian firms that were bidding for major capital projects outside of Canada. PEMD-Industry contributions were repayable based upon sales volume that was realized over two to four years. However, by 2004 the PEMD-Industry part of this program was terminated (Foreign Affairs and International Trade Canada, Annual Report, 2005-2006).

PEMD-Associations provided financial support in the form of contributions to Canadian national sectoral associations for the export promotion of their industry’s products or services. There were three types of international business promotion activities that were funded by PEMD-Associations: (1) direct contact such as trade shows, (2) marketing tools such as web site development and (3) print materials that promoted the export of the associations’ goods and services. The cost of these activities was shared by both the federal government and the association. Annual non-repayable contributions ranged from a minimum of $20,000 to a maximum of $150,000 (Foreign Affairs and International Trade Canada, Annual Report, 2005-2006:3).

PEMD-Associations continued until December 11, 2008 when the Government of Canada approved a new Global Commerce Support Program (GCSP). The GCSP is a contribution program that groups three existing programs “under one umbrella.” The three programs that are grouped under the GCSP are the following: (1) Global Opportunities for Associations (GOA), (2) Invest Canada-Community Initiatives (ICCI), formerly known as Community Investment Support Program (CISP), and (3) Going Global-Innovation (GGI), formerly known as Going Global and Science and Technology (GG) for companies and researchers. Associations were eligible to apply to programs under the GCSP umbrella beginning on November 30, 2009.
The Global Opportunities for Associations (GOA) program is similar in many ways to PEMD-Associations. It provides funding to support national associations undertaking new or expanded international business development activities in strategic markets and sectors in order to benefit an entire industry. Contributions are non-repayable and they range from a minimum of $20,000 to a maximum of $150,000. Funding approvals are made for a one-year period for activities taking place between April 1 and March 31 of the following year. GOA will provide matching funds of up to 50 per cent of eligible expenses. GOA currently provides over $2 million a year for such purposes. In 2009, 32 associations received such funding.

To be eligible to receive any funding an association must meet the following criteria:

- Be a national association (or in some cases, a regional association with a national perspective) whose objective is to promote sector-specific international business development for its members and industry at large;
- Be registered as a partner-client (industry association) with the Virtual Trade Commissioner;
- Be incorporated;
- Not directly sell products that are sold by its members.

However, unlike PEMD-Associations, GOA compels any association applying for funding to meet the following additional criteria:

- Any association applying for funding must have a documented international development strategy which has been approved by the association’s Board of Directors;
- All associations applying for funding must demonstrate adequate managerial and marketing capabilities;
- All associations must have sufficient financial resources to meet their share of proposed activities;
- Any association applying for funding must have copies of their Financial Statements for the past two years.
As was the case with PEMD-Associations, GOA will fund three similar types of international business promotion activities: (1) direct contact such as trade shows, as well as outgoing missions and incoming visits, (2) marketing tools such as web site development targeting foreign customers, and (3) print materials that promote integrative trade opportunities of a Canadian industry. GOA will also fund other marketing activities such as research, awards programs, and indirect marketing that promotes relationship building, or improves access to foreign markets (http://www.tradecommissioner.gc.ca./eng/funding/global-opportunities-associations/eligibil).

The last program to be analyzed is the Invest Canada Community Initiatives (ICCI), formerly known as the Community Investment Support Program (CISP). A brief overview of CISP will set the context for ICCI. The Community Investment Support Program (CISP) was launched in 1998. CISP was a program whose mandate was to help municipalities attract and retain foreign direct investment. This program was coordinated by Foreign Affairs and International Trade Canada.

CISP funding was targeted to three principal types of clients: (1) smaller communities that had limited economic development resources, (2) mid-sized regions and communities which had some existing economic development programs, and (3) larger regions and communities that already had active foreign investment programs. CISP funds were used to develop two main categories of activities: capacity-building and strategic development and implementation. The capacity-building category involved conducting basic research to help a community identify its key sectors and strengths within those sectors. Those people who were engaged in the work of strategic
development and implementation helped communities develop strategies and studies that set out a vision and overall plan for attracting foreign direct investment (www.cisp.gc.ca).

When the new Global Commerce Support program (GCSP) came into effect on December 11, 2008, and CISP was renamed ICCI and subsumed under its umbrella, the thrust of this program for all intents and purposes remained the same. ICCI supports initiatives that promote and sustain foreign direct investment in Canadian communities. The goal of the program is to assist communities in developing the tools needed to attract and retain such investment. Under this program, communities can receive up to 50 per cent in matching funds to assist them with the development and execution of these investment attraction strategies. A look at a list of approved applications for 2009 reveals the fact that some of these recipients were cities, some were towns and some were regional associations. Applications are evaluated according to their strategy, project components, performance measures, capacity, work plan and the level of public-private sector partnerships.

The aims and objectives of ICCI are as follows:

- To enhance the capability and effectiveness of Canadian communities to attract employment creating foreign direct investment (FDI) by providing them assistance in developing foreign direct investment attraction, retention and expansion initiatives;
- To encourage and promote the pursuit of excellence in the development of investment programs by allocating funds on the basis of competition that is judged on clear, long-term planning principles and demonstrated cooperation between the private sector and municipal government;
- To help Canadian communities become more effective in dealing with foreign direct investment aftercare and support specific foreign investment promotion initiatives;
- To encourage intergovernmental cooperation, promote partnerships with the private sector and demonstrate federal commitment to encourage foreign direct investment and retention (http://www.international.gc.ca/funding-financement/investment-investissement/features.asp).
Eligible recipients for this program are the same Canadian communities and non-profit locally-based organizations that CISP funding was targeted towards: (1) smaller communities that have limited economic development resources, and who are primarily interested in obtaining assistance to offset costs that are associated with developing tools aimed at foreign investor servicing; (2) mid-sized regions and communities which have some existing economic development programs, but are now requesting assistance for specific marketing oriented activities; and (3) larger regions and communities that already have active foreign investment programs but who now desire assistance to develop and implement multi-year international investment attraction and retention strategies.

In addition to the above, ICCI adjudication committees may also support the contribution of a community, or not-for-profit organization, that acts as a third party intermediary on behalf of a number of eligible communities.

Finally, successful recipients of ICCI monies must submit a progress report as well as a final report. Progress reports allow ICCI officers at headquarters to monitor progress and anticipate any amendments to the signed Contribution Agreement that may be required.

The final report must detail how the results were achieved and how the funding was allocated. The report must also describe the activities that were completed and the benefits that were achieved. This report must be submitted at the end of the project, and a follow-up interview may take place up to 36 months after the project is completed. (http://www.international.gc.ca/funding-financement/investment-investissement/apply-dema).
Provincial Programs

As one begins to look at the provincial scene, it is here that one truly begins to observe the paucity in programming that is available to support the development of the fashion cluster. The fact of the matter is that there are not any programs per se that the provincial government has specifically developed for the fashion industry.

Within provincial government circles, those officials who were knowledgeable about such concerns indicated that perhaps one program that is used for manufacturing in general might have some potential applicability to the fashion cluster in particular.

The program that these provincial government officials are referring to is the Advanced Manufacturing Investment Strategy (AMIS) which was created by the Ontario government in 2006. AMIS is a $500 million repayable loan program that encourages firms to invest in leading-edge technologies and processes which will increase productivity and competitiveness.

Upon closer examination, however, it turns out that AMIS is not really applicable to this situation. While it is true that AMIS is open to all manufacturing sectors, and since there are clothing manufacturers in Toronto they would qualify, the reality of the situation is that most clothing manufacturing concerns in Toronto are simply not large enough to meet the criteria of this program. This is the case because eligible projects must create 50 or more jobs, or else they must have a minimum total project investment of $10 million over a five-year period. Since most designer/manufacturers are classified as SMEs (small and medium sized enterprises) these firms are too small to meet the requirements of this program. To underscore this point, officials within the provincial
government stated that they had not seen one application from a clothing manufacturer seeking a loan through the AMIS program.

**Multi-level Governance Coordination**

It seems obvious as well that this paucity of programs would make it more difficult to attain multi-level governance in this particular case. When our interviewees were asked how effectively, and in what ways, do the three levels of government work together in support of cluster-related innovation policies in the City of Toronto their responses were both direct and critical at the same time. Out of the many interviews that were conducted for this second case study, over 70 per cent stated that there was little or no evidence from their point of view that coordinated multi-level governance existed here in Ontario or Toronto in support of the fashion cluster.

When one interviewee was asked whether he had ever seen anything like some kind of multi-level governance approach in Ontario, this person responded by saying, “No, I have never seen that. I have never seen the federal government coming to the City government asking to deal with them directly about anything. There is no City, provincial or federal coordination of policies for the fashion cluster in the City.”

Not only is there no coordination of policies by all three levels of government, there is not even one specific program that the City can apply directly for, apart from CISP for export help, so that it can grow the fashion cluster. And the fact that there is not one major program available from the provincial government further compounds the problem.

That being said, this does not mean that some idealized version of multi-level governance is being advocated here since such an entity simply does not exist. It will be recalled that in Chapter 1, our examination of the literature on this topic disclosed the fact
that Gary Marks had defined multi-level governance as “a system of continuous negotiation among nested governments at several territorial levels” (Bache and Flinders, 2004:3). Bache and Flinders then state that in order to develop his definition, Marks relied on the analysis of the policy networks approach in describing how within multi-level governance “supranational, national, regional and local governments are enmeshed in territorially overarching policy networks” (Bache and Flinders, 2004:3).

So when Bache and Flinders state that governments are enmeshed in territorially overarching policy networks, one could easily interpret that to mean that these governments have agreed to work together and are sharing policy space. Thus, if these governments are sharing policy space, it could then be assumed that all the policy players know exactly what programs they are coordinating together and sharing, and therefore, they would not take advantage of programs without all of the other policy players knowing about it.

Even though contrasting visions of multi-level governance do exist, it would be wrong to assume that the above assumption is completely correct. While it is true to a certain extent that what Bache and Flinders have described may well partly be occurring, the fact of the matter is that it is wrong to rely only on what Bache and Flinders, or any other single author’s, initial definitional views are on this subject. Why? Because there is always lots of room in a multi-level governance and networks setting for policy players to talk to each other, but this does not mean they have to coordinate their actions in detailed ways. It also means that they certainly do not have to tell each other about all their actions or the many needs that their agencies, firms and research institutes have now and into the future, since this would nullify their discretionary room to maneuver as they see
fit. This kind of approach to governance fits well within Prime Minister Stephen Harper’s stated commitment to ‘open’ federalism “in which the federal government sticks to national responsibilities leaving provinces to govern and manage their own jurisdictional responsibilities” (Doern and Stoney, 2010-11:6).

While it can be acknowledged that these are difficult empirical questions, the fact of the matter is that multi-level governance coordination does not happen just because someone is defining it as such or defining it as the essence of networks.

Intrigued by these responses, a further question was posed to the interviewee as to why it is that the federal and provincial governments do not want to get involved with the fashion cluster. This individual responded with the following direct reply:

It is not a priority sector for these levels of government. I think that there is a certain sense that this is a sunset industry. I do not think people understand the value of the design component in it; I do not think that there is a broad understanding of the value of the local ownership of the firms and of what they can contribute. I don’t think that people in government understand the linkages to innovation in the industry. And I do not think that people understand the important contribution that this industry makes to culture in this province. Certainly, there has been an understanding that where aerospace, automotive and biotech are of interest to the senior levels of government, the fashion/apparel sector has not captivated and interested them in the same way. And there is not a clear fit for it from the perspective of the design piece in this sector in the same way that there is for the other design industries. It should be something that we are looking at in innovation, in culture and in industry, but we are not doing that.

Another interviewee was equally candid and forthcoming in responding to questions about multi-level governance. When this interviewee was asked whether or not multi-level governance existed within Ontario, the interviewee indicated that he had never seen any evidence that multi-level governance existed. In the past, however, there was a time when all three levels of government actually worked together on very small, specific projects, but today those days are gone because there is not any more money for this type of venture.
Upon being asked to elaborate further on this matter, our interviewee gave us a rare moment of candor by stating the following:

The federal government has deemed it [the fashion cluster] not to be one of the key industries. It is not important as opposed to some of the others such as aerospace, ICT, or automotive. It all comes down to money: the government looks at these industries and they consider the ones that they think are going to be leaders. And having looked at the situation, the federal government has decided that the apparel and textile industry is not one of our leaders today. About five or six years ago, the three levels of government did work together on small projects. There were small budgets for this work as well. But since 2005, they have not had anything for the apparel and fashion industry, except for working with some of the industry associations.

Yet another interviewee thought that the three levels of government did not work well together, and therefore much more needs to be done in order to bring about true multilevel governance. However, this interviewee thought that part of the problem concerning the lack of multi-level governance in Ontario was a result of a lack of coordination among firms themselves. The crux of the problem is that firms do not know each other very well within the apparel sector. The firms that make suits do not know the firms that make underwear. The only similarity they share is that they more or less sell to the same stores, but not to the same buyer. Apart from that they market their products differently, they make their products differently, and very often, they have a totally different outlook on the world.

While on the surface this may look as if it has nothing to do with government, it does. It does precisely because what was just described about these firms’ behavior above is very hard for any government to understand unless they really listen carefully and make sure they reflect all of the various groups’ needs within the industry. That is a difficult thing for any one level of government to accomplish. The lesson here is that firms within
a sector need to learn to speak with a more coherent voice so that any level of
government within a multi-level governance setting can appreciate their concerns.

A further interviewee was also candid about the nature of multi-level governance in
Ontario, as well as about issues concerning trade policy and its relationship to multi-level
governance as it pertains to the fashion sector in this country. This individual did not see
any concrete evidence that would support the fact that multi-level governance existed
and went on to say the following:

The only thing that drove anything we got out of the government [federal government]
was the fact that a big portion of the manufacturing was done in the province of Quebec.
Otherwise the government would not have given us anything. It is a traditionally Quebec
industry. There are huge programs at the provincial level; there is no equivalent in
Ontario. The industry was smaller here, but we had a significant industry. We employed a
huge number of people, but it never got on the provincial radar. As far as the City of
Toronto is concerned, I can’t be negative about the City. The City has done a tremendous
amount despite its lack of resources. It has done a lot to support the smaller companies.

However, this interviewee was not finished with this topic. He argued that if true
multi-level governance were to exist in the future, then the actions of the federal
government in particular needed to change. The federal government needed to start
developing policies that actually would work to benefit the apparel sector and not hurt it
as it had done in the past with its free trade policy. In a passage that is brimming with
indignation and anger, this interviewee had the following comments to make about the
role of the federal government:

In Free Trade they have got religion. They are true believers. If one looks at American
traders, they talk about free trade, but it is all manipulation to gain advantage for their
domestic industry. The Americans are only interested in opening a market if they will
obtain more of an advantage. But the Canadian traders are true believers. They think if
you open a market good actually comes from that. What they did to us!!!
What they did with this industry, and that is why we are a good example, is they removed all the duties on inbound garments, but they kept the duties on inbound textiles. So a manufacturer here competing against a manufacturer in Bangladesh is facing the fact that the exact same garment comes in duty free from Bangladesh but we have to pay duty on the textile to make the exact same garment. These actions gave away our jobs, and it took them five years to even address the issue. Meanwhile, from day one our companies start suffering until they are killed off. They can’t wait five years to have that kind of thing dealt with. And they have not completely dealt with it.

We have got to get rid of the International Trade Department in Ottawa. Because this is the problem: it is populated by true believers and they don’t have a clue what their actions are doing. Our industry is just an example of what is the absolute worst thing you could do in trade policy and they did it, and they killed the industry. There are advantages to domestic manufacturing, and some of these people could have competed.

While this is an important critique of one of the major public policies to come out of Canada over the last twenty-five years, this lengthy quote clearly illustrates the profound effect such a policy has had on a major industry in the City of Toronto, and in Ontario. The relationship this interviewee has established between the potential role that trade policy would play, through the federal government, and how this federal government role would impact a multi-level governance setting that is devoted to cluster-related innovation policy making is a very important issue. Notwithstanding the fact that some sectors, and firms within sectors, did benefit from free trade, and taking into consideration that industry policy did not totally end because many incentive programs were changed to comply with trade obligations, nevertheless, the above critique is important because it calls into question the idea that all that was needed in this country was a free trade policy without any further industrial policy, or even possibly cluster-related innovation policy, being attached to it.

But this is not the first time that such a cautionary note has been sounded. During the time of the actual free trade negotiations, as well after the free trade treaty was signed, numerous scholars added their voices to the debate over this complex issue. While
acknowledging the fact that many of Canada’s past attempts at practicing industrial policy have been problematic, and that much of the past criticism of such practices has been accurate, the fact of the matter is that this criticism did not deal adequately “with the situation Canada is going to face in the 1990s and beyond” (Doern and Tomlin, 1991:256-57). While many of these same scholars were convinced that Canada needed free trade so that it could achieve expanded access to the United States market, and other world markets, most of these same scholars were convinced that Canada also needed “a more concerted industrial policy to complement free trade. This is because comparative advantage in international trade is to some extent engineered” (Doern and Tomlin, 1991:257).

The Macdonald Royal Commission that paved the way for the acceptance of free trade in Canada also wrestled with this issue. One of the most important Commission studies was the one conducted by the Canadian economist Richard Harris from Queen’s University. Professor Harris supported the idea of free trade, but he also argued that “there was a good economic case for the practice of an active targeted industrial policy, and that such an industrial policy was especially necessary for small, open trading nations such as Canada” (Doern, 1990:58).

But Professor Harris also went on to develop a more specific economic case for firm or sector-specific policies. He based his argument on the notion that some product development cycles were characterized “by both increasing returns to scale and imperfect competition. Therefore, in theory, a case exists for government to help capture some of these greater gains from trade (an active industrial policy) or to prevent a country from losing out entirely (a reactive industrial policy)” (Doern, 1990:58). While CUFTA does
not completely prevent this possibility, “it makes it more difficult” (Doern and Tomlin, 1991:257).

It needs to be noted that the Harris position which advocated for an industrial policy as a complement to free trade in Canada was rejected by the Macdonald Royal Commission. But the evidence that has been presented to us, through the perceptions of our interviewees in the second case study on the fashion cluster, certainly seems to support Professor Harris’s original position regarding the deleterious effects that would occur should the implementation of a free trade policy, without a supporting industrial policy to underpin it, ever take place in a small, open trading country like Canada.

As all of the above interview data indicates, our second group of interviewees clearly think that there are many problems with a multi-level governance approach to cluster-related innovation policy-making for the fashion cluster. The fashion cluster is also suffering from a lack of programs. The primary federal program, CATIP, has recently been terminated, although garment industry officials are lobbying for its reinstatement in some form. The provincial government has nothing to offer, and appears not to be very interested in this sector if interviewees’ perceptions of the problem are to be taken as valid. Moreover, any programs that do exist can only be accessed by firms directly or by so-called third party organizations.

This is not necessarily a problem per se, given what has already been stated regarding Bache and Flinders approach to multi-level governance policy networks. In this case as well the sharing of policy space may partly be occurring, since there is the problem of ‘take-up’ by Toronto fashion cluster firms, which the thesis has not examined in part due to inadequate data. But it also needs to be recalled that in any multi-level governance and
network setting, there is always lots of room for policy actors to talk to each other without having to coordinate all of their actions in detailed ways. This could very well be what is happening in this situation.

However, even if there were more programs this cluster is still facing major challenges when it comes to the design and coordination of multi-level governance policy. Once again, according to many of our interviewees, it is their perception that this simply is not happening, notwithstanding what has just been stated above regarding any single author’s initial definitional views about multi-level governance and networks. Except for CISP, now known as ICCI, none of the federal government programs were directly accessible by the City: they either went to firms or else they went to third party organizations. Many of our interviewees indicated in their conversations that there is a lack of linkages and networks between state and non-state actors, and, from their perspective, it is the lack of these linkages and networks that are acting as a barrier to the development of multi-level governance. So on the surface, it appears that a lot more work is needed for the coordination of efforts on the part of the three levels of government, as well as non-governmental actors, if true multi-level governance is ever to take place. However, as has been pointed out earlier in this chapter, in some subtle ways more multi-level governance may be taking place than was originally thought to be the case. This still leaves plenty of room for policy actors to talk to each other without coordinating all of their actions.

Moreover, as has been so cogently articulated by one of our interviewees, any policies that are put forward by the federal government, within a multi-level governance setting, must be policies that actually work to benefit the development of the cluster and
not seek to destroy it through blind adherence to what some interviewees perceived to be a free market ideology whose time, in their view, has ceased to be relevant. The phenomenal job losses that have occurred over this past decade is clear evidence that some type of an industrial policy that truly aids this sector is in order. With CATIP now terminated, a policy window of opportunity currently exists to bring about such a change in policy thinking.

The Toronto fashion cluster can be strengthened for a new future that will be devoted to advanced, knowledge-based manufacturing, and creative fashion design, with the right mix of new policies.

CONCLUSIONS

This chapter has analyzed the second case study, the Toronto fashion cluster. The research framework has been used to examine the fashion case study by looking at the framework variables of leadership, local government finance and multi-level governance programs and activities. Several main conclusions emerge regarding the Toronto fashion cluster, some similar and some quite different to the first case study.

First, the analysis of key documents showed that leadership came from the Mayor, from Toronto City Council, and from the city bureaucracy regarding the key different agenda-setting reports. But these reports also showed again that the leadership discourse was quite diverse. Cluster policy was present, but it was typically embedded in larger policy discourse, including, as in Chapter 5, economic development, competitiveness, prosperity, and industrial sector policy of a more traditional but still used kind.

When our fashion cluster interviewees were asked how important leadership was in all of its forms for the development of a cluster-related innovation policy, some interesting
results were forthcoming. First, all of the interviewees agreed that political leadership is one of the most important variables that must exist if a cluster-related innovation policy is to have any chance of achieving the objectives for which it is designed.

However, as important as political leadership is to the success of establishing a cluster-related innovation policy, what happens at the level of entrepreneurial leadership is equally important. Many of the interviewees thought it was critically important that greater leadership is forthcoming from business than has been the case in the past.

That being said, what distinguishes the fashion cluster interviewees from those in aerospace is the fact that the interviewees for the leadership variable were divided in their opinions over which variable predominates for the successful attainment of a cluster-related innovation policy: political leadership or entrepreneurial leadership. Those who thought that political leadership predominated argued the case that political leadership was key because it brought out the profile of the industry, thus gaining more access to the budget.

The counter argument to the above is that entrepreneurial leadership predominates over that of political leadership. Those who argued for this case think that politicians want a constituency that is calling for action on a particular issue before they will enter the debate, and that is why entrepreneurial leadership is so critical.

However, if the lack of entrepreneurial leadership is problematic, the lack of civic entrepreneurship is also a matter of concern for the fashion cluster. All of the interviewees agreed that there is no civic entrepreneur working within the fashion cluster. Many of the interviewees agreed that any of the people who are in a position to lead fashion cluster policy development have not linked it to broader social networks such as
the Toronto City Summit Alliance, nor have they defined issues that arise in fashion in terms of broader policy issues. Therefore, most agreed that it would be very beneficial to have civic entrepreneurs working for the overall benefit of the cluster. In the end, however, it is the blending of shared leadership, and mentorship, that is needed for the cluster to be successful.

The analysis of the local government variable showed again the very constrained financing available for both economic development and the tiny level of resources designated for clusters per se, including of course the fashion cluster.

This concern over adequate funding is reflected in the interviewees’ comments. Most of the interviewees agreed that much more money is needed for the development of a cluster-related innovation policy, especially when it was compared to the amount that Montreal has for this same purpose.

The analysis of multi-level governance programs and activities revealed a number of problems. First, there is a paucity of programs available for the development of the fashion cluster at the federal government level. There are only three programs that are administered by the federal government, and none at the provincial level of government that have been specifically designed and developed for the fashion industry. Second, some of our interviewees argued that this sector seems to be suffering from neglect and indifference, and the origins of this neglect and indifference go all the way to the highest levels of the provincial government.

Third, even if there were more programs this cluster is suffering from the same fate that plagued the aerospace cluster when it comes to the design and coordination of multi-level governance policy. According to many of our interviewees, it is their perception
that this simply is not happening. So again, it appears that a lot more work is needed for the coordination of efforts on the part of the three levels of government, as well as non-governmental actors, if true multi-level governance is ever to help develop effective cluster-related innovation policy.
Chapter 7

COMPARATIVE ANALYSIS OF THE TWO CLUSTER CASE STUDIES

INTRODUCTION

This chapter presents a comparative analysis of the two cluster case studies by examining the three main variables in the analytical framework, as well as also looking at some interactions among them. Table 7.1 drawn and summarized from the two case study chapter tables helps preview and guide the comparative analysis and is referred to throughout the chapter.

The structure of this chapter is quite straightforward. The first three sections deal in turn with the leadership, local government finance, and multi-level governance programs and activities variables. The fourth section looks at some of the interactions among the variables and comments on their relative role in explaining or understanding the differences in cluster development and implementation. Conclusions then follow.

THE LEADERSHIP VARIABLE

Apart from any other specific documents that were created as an outgrowth of individual cluster development initiatives, the Toronto Economic Development Strategy, which appeared in July 2000, along with the Agenda for Prosperity, which appeared in January 2008, were the only major economic documents to come out of the City of Toronto for the twelve-year period that is being covered in this thesis. As such, these documents had an equal impact on the development of both the aerospace and fashion clusters. The leadership for the first document came from City Council, while the leadership for the second document came from Mayor David Miller.
In point of fact, the type of leadership that is being examined within these documents is the combined political leadership that is coming from City Council, the bureaucracy and the mayor.

Table 7.1 Summary Comparison of Toronto Aerospace and Fashion Cluster Case Studies
(for detailed data and information, see tables in Chapters 5 and 6)

<table>
<thead>
<tr>
<th>Framework Variables</th>
<th>Aerospace Cluster</th>
<th>Fashion Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leadership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Toronto City Council</td>
<td>- Lead role in developing <em>Toronto Economic Development Strategy</em></td>
<td>- Lead role in developing <em>Toronto Economic Development Strategy</em></td>
</tr>
<tr>
<td>- Mayor</td>
<td>- Lead role in developing <em>Agenda for Prosperity</em></td>
<td>- Lead role in developing <em>Agenda for Prosperity</em></td>
</tr>
<tr>
<td>- City Bureaucracy</td>
<td>- Lead role in formulating strategy for new economic strategy</td>
<td>- Lead role in formulating strategy for new economic strategy</td>
</tr>
<tr>
<td>- Political</td>
<td>- Political leadership critical to City innovation policy success</td>
<td>- Political leadership important to City innovation policy success</td>
</tr>
<tr>
<td>- Entrepreneurial</td>
<td>- Entrepreneurial leadership important to cluster-related innovation policy</td>
<td>- Blended political and entrepreneurial leadership needed for cluster-related innovation policy</td>
</tr>
<tr>
<td>- Civic</td>
<td>- little or no civic leadership</td>
<td>- little or no civic leadership</td>
</tr>
<tr>
<td><strong>Local Gov. Finance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- City operating budget</td>
<td>-$8.2 Billion</td>
<td>-$8.2 Billion</td>
</tr>
<tr>
<td>- City economic development</td>
<td>-$9,489,000</td>
<td>-$9,489,000</td>
</tr>
<tr>
<td>budget</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- City cluster policy development spending</td>
<td>-$15,000 per year</td>
<td>-$30,000 per year</td>
</tr>
<tr>
<td><strong>Multi-level Governance Programs and Activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Federal</td>
<td>-3 Direct Programs</td>
<td>-3 Direct Programs</td>
</tr>
<tr>
<td>- Provincial</td>
<td>-2 Direct Programs</td>
<td>-No Direct Programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-No Indirect Programs</td>
</tr>
</tbody>
</table>
The document analysis in Table 7.1 above shows us that for both the aerospace cluster and the fashion cluster the leadership variable indicates that City Council, the City bureaucracy and the mayor played essentially a similar leadership role when it came to developing and formulating economic development strategies. By extension, this implies that both the aerospace cluster and the fashion cluster bore the fruits of this development in an almost equal fashion. There is one exception to the above and it is discussed below in the section dealing with the local government finance variable.

It was City Councillor Brian Ashton who put forward a motion to create the Economic Development Steering Committee. And it was City Council that played the primary leadership role in driving this Economic Development Steering Committee to produce the new economic development strategy.

But even though the primary leadership role for this initiative came directly from City Council, this does not mean that all leadership for the development of this new economic development strategy came directly from City Council. There were occasions where City Council had to rely upon the leadership of the bureaucracy at City Hall to achieve its goals. When such occasions arose, City Council worked together with members of the bureaucracy who possessed both the leadership ability, along with the expertise, to develop the details of this strategy. The bureaucracy also assumed a leadership role when it developed the specific plans for the new economic development strategy.

With the creation of the *Agenda for Prosperity* a different kind of leadership was on display. In June 2006, Mayor David Miller established the Mayor’s Economic Competitiveness Advisory Committee. He drove the entire process making sure that the
*Agenda for Prosperity* was completed on schedule. Once this document was published, it re-affirmed the City’s commitment to cluster-related innovation policy development.

After these main economic framework documents were completed and the City started dealing with specific economic sectors, the City also demonstrated a leadership role in the creation of *Flight Path*. This document was developed as an outgrowth of individual specific cluster development initiatives on the part of the Aerospace Action Partnership (AAP). Even though the AAP was a multi-stakeholder group it was controlled and run by City Council. However, this is as far as City Council’s leadership influence went in this regard.

The documents also reveal the fact that the type of specific cluster development initiative that was created for the fashion cluster was very different from the one that was created for the aerospace cluster. There was not any organization like the Aerospace Action Partnership (AAP) created for the fashion cluster. Thus, there was also no opportunity to develop a long-term strategic planning document like *Flight Path* for the fashion cluster.

The only institution the City created for the fashion cluster was the Apparel Industry Development Council (AIDC) and this organization, as we saw in chapter 6, had a very different mandate from that of the AAP.

While the documents provide ample evidence that some leadership was coming from City Council, the bureaucracy and the mayor when it came to the development of the City’s economic and cluster-related innovation agenda, the aerospace and fashion interviewee views provide another important comparative perspective on the leadership variable.
When the aerospace cluster interviewees were asked how important leadership was in all of its forms for the development of a cluster-related innovation policy, several significant points emerged. First, all of the people who were interviewed for the aerospace case study agreed that leadership in general is one of the most important variables that must exist if cluster-related innovation policy is to have any chance of being developed successfully. Some of the people thought that leadership is important because the success that one sees is directly related to the person who is leading the initiative.

Second, political leadership was especially seen to be critical to the overall success of a cluster-related innovation policy within the city. However, a look at Table 7.1 shows us that there is a subtle difference in the evidence about the importance of this variable. The aerospace interviewees stated that political leadership was critical to the development of cluster-related innovation policy, while the fashion interviewees characterized political leadership at the municipal level as only “important” for cluster-related innovation policy development. That said, overall political leadership is critical for two reasons: first, one has to develop engagement and ties with local government; and second, one needs to drive that engagement up to the level of the federal and provincial government, as well as outwards to business, universities and community colleges. If one does not have the appropriate level of leadership, one does not get the local government on board; and if one does not get the local government on board, one cannot mobilize the federal or provincial government because one does not have enough MPs to drive and communicate local concerns to these senior governments.
Third, many of the aerospace cluster interviewees stressed how critical it was to have the political leadership and support of all three levels of government in the development of cluster-related innovation policy. Without this support, the interviewees thought that the cluster as a networked and partner-based system would not exist. Leadership is important in all of this because it creates coalitions, gets people to follow goals, and gets initiatives through. Without good leadership in all of these areas things easily stagnate.

That said, most of the aerospace interviewees did not think that any purported cluster-related innovation policy that was put forward by the City of Toronto has had any impact on cluster development whatsoever during the period covered as a whole. Moreover, many of these same interviewees did not think that a cluster even existed.

As the interviewees for the aerospace case study clearly indicated, the leadership of the cluster has failed to bring together the interested stakeholders within the cluster, the firms, the academics, the various levels of government, along with the industry associations, to develop a proper cluster-related innovation policy which would seek to develop the many new technologies that are required to support our aerospace industry in Toronto, and in Ontario, into the future.

Instead, the leadership of the Aerospace Action Partnership (AAP) allowed itself to become sidetracked by what many saw as an excessive interest in obtaining a share of the production program known as the Bombardier “C” series. This interest in obtaining a share of the “C” series work for the de Havilland aircraft firm in Toronto is what eventually caused the cluster’s demise, thereby destroying any chance of creating a proper cluster policy. This inaction, and lack of leadership, on the part of the AAP also set the stage for a group of independent aerospace executives to come together to try and
map out a new technology policy for the aerospace sector through their report known as the *Future Major Platforms Initiative*.

The interviewee’s responses on the leadership variable for the fashion cluster provide us with some major differences in their approach to the topic. While acknowledging the importance of leadership in general, and political leadership in particular, for the development of cluster-related innovation policy, the people who were interviewed for the fashion cluster placed a much greater emphasis on what happens at the level of entrepreneurial or business leadership than the aerospace interviewees did. Fashion cluster interviewees were divided in their thoughts over which source of leadership is most important: political leadership or entrepreneurial leadership. This is in direct contrast to the aerospace interviewees who thought that entrepreneurial leadership was important, but they did not think it was as important as political leadership for success. However, entrepreneurial leadership is not an easy thing to achieve, since so many of the fashion cluster firms are very small, highly entrepreneurial and fiercely independent entities.

It is also true, however, that a certain group of fashion cluster interviewees thought that political leadership at the City level was key because it brings out the profile of the industry, thus allowing for more access to the budget. The counter-argument to this position is that entrepreneurial leadership predominates over that of political leadership. Quite a number of fashion cluster interviewees thought that it is only when politicians see business people truly engaged in a particular problem that they realize its significance and start to become engaged with the problem themselves.
The questions that were posed to the interviewees concerning the leadership variable also took into account the problem of civic entrepreneurial leadership. The responses from the aerospace and fashion cluster interviewees were similar in one respect but different in another. Both the aerospace and fashion cluster interviewees agreed that there is little or no civic entrepreneur leading within either one of the aerospace or fashion clusters. However, the analysis also shows us that the aerospace cluster interviewees simply thought that civic entrepreneurship was lacking and that it should be developed; whereas the fashion cluster interviewees agreed with them, but also thought that the people who are in a position to lead the development of fashion cluster-related innovation policy have not linked it to broader social networks such as the Toronto City Summit Alliance, nor have they defined issues that arise in fashion in terms of broader policy issues. In this regard, the fashion cluster interviewees appear to have a more sophisticated understanding of the importance of networks to the overall development of cluster-related innovation policy. Moreover, unlike the aerospace interviewees, the fashion interviewees thought that as crucial to the success of the cluster as all three strands of leadership are: political, entrepreneurial and civic, ultimately there has to be a blending of shared leadership, and mentorship, for it to be successful.

There is one last area of leadership that needs to be included in our main comparative case study findings and that is the leadership, or lack thereof, occurring within industry associations. Both the aerospace and fashion interviewees had concerns about this type of leadership and its impact on cluster-related innovation policy development.

Overall, the aerospace interviewees indicated that they were fortunate to have a fairly decent association that does provide some industry leadership. But some interviewees
thought that more emphasis needed to be placed on fostering leadership within the association that can take a more active role in developing cluster-related innovation policy.

The fashion cluster interviewees had other concerns. They thought that the Canadian Apparel Federation (CAF) was not playing a big enough leadership role in bringing the apparel/fashion sector closer together so that it could be in a position to help with the development of its own cluster-related innovation policy. However, this will not be an easy thing to do given the secrecy, competitiveness and fractious nature of this industry. Further compounding the problem is the fact that the majority of the fashion cluster interviewees only think of the fashion sector as a supply chain and not a cluster.

THE LOCAL GOVERNMENT FINANCE VARIABLE

Since the City of Toronto’s core Budget Documents impacted the development of both the aerospace and fashion clusters in much the same way, over the same twelve-year period, several overall comparative points are worth noting analytically.

First, over a ten-year period Toronto’s operating budget increased by 68 per cent; the same claim cannot be said for the City’s Economic Development Division Operating Budget. Its budget had increased only by 30 per cent during the same ten-year period.

Second, as noted in Chapters 5 and 6, obtaining data on the spending that goes into specific cluster development has been difficult. However, one piece of concrete evidence was found in the Budget Advisory Committee Agenda meeting documents for 2006, which stated that the gross amount of money available for economic development sector initiatives was $220,500. Once this amount of money is divided into the seven clusters, it yields a figure of $30,000 per cluster. These figures clearly illustrate the fact that the City
does not have adequate resources in and of itself to engage in the complex process of cluster-related innovation policy development.

This concern with funding clusters allows us to finally shed light on another vital issue that only affects the fashion cluster and that is the relationship that exists between the City and the Toronto Economic Development Corporation (TEDCO), as well as the relationship that exists between TEDCO and the Toronto Fashion Incubator (TFI). Research conducted for this thesis has uncovered the fact that TEDCO does have an important role to play in funding cluster development. There are really two sources of funding that are used for this purpose: there is the source of money that the Economic Development Division of the City receives from the City Budget, and there is money which TEDCO provides to the Toronto Fashion Incubator (TFI). TEDCO is not at liberty, however, to disclose just how much money is given to the TFI each year. What can be stated is that the TFI does receive a grant from TEDCO once a year that is rather substantial. What TEDCO does as an organization is to provide assistance to advance the City’s cluster policy.

Finally, and by way of comparison with another city in Canada, both the aerospace and fashion cluster interviewees stressed the fact that the City of Montreal is much more deliberate and focused on its economic development strategy than is the City of Toronto. One of the principal reasons why this is the case revolves around the issue of federal money that is available to the provincial government of Quebec. Once the provincial government combines the money it is receiving from the federal government with its own money, it is able to distribute monies in the order of $2 million per cluster. This amount of money gives Montreal the opportunity to do several things from building up a proper
program, to building a real staff to deliver the program, so that a city can push an industry in the direction it desires it to go. In the case of Montreal, this amount of money has proven to be a real vehicle for collaboration since this kind of money brings people around. However, when the City of Toronto puts in $30,000 or less, per cluster, this does not have a lot of leverage within the industry. And it is one of the reasons why one of the interviewees stated that, “the City is there, but they are just dabbling in it.”

THE MULTI-LEVEL GOVERNANCE PROGRAMS AND ACTIVITIES VARIABLE

The documents for the multi-level governance programs and activities variable reveal that there are a number of programs for the aerospace cluster but there is a paucity of programs for the fashion cluster. There are a total of seven programs that can affect the development of the aerospace cluster; three of these programs can be classified as direct programs while the remaining four programs can be classified as indirect programs, inasmuch as they can apply to all types of knowledge-based development.

As has been described earlier in the thesis, the three programs that directly impact the development of the aerospace cluster are: the (1) Community Investment Support Program (CISP), (2) Technology Partnerships Canada (TPC) and (3) Strategic Aerospace and Defence Initiative (SADI). The four indirect programs are: (1) National Research Council’s Industrial Research Assistance Program (NRC-IRAP), (2) Industrial Regional Benefits (IRB), (3) Scientific Research and Experimental Development (SR& ED), and (4) Export Development Canada (EDC).

There are also two provincial programs that can impact the development of the aerospace cluster, namely the previously described (1) Advanced Manufacturing Investment Strategy (AMIS), and the (2) Next Generation Of Jobs Fund (NGOJF). AMIS
is a loan program that was created by the provincial government to encourage firms to invest in leading-edge technologies that increase productivity; and NGOJF is a program designed to help firms take the lead in capturing worldwide markets which offer long-term growth.

The major federal programs that are available for the development of the fashion cluster are certainly not as numerous. They are (1) The Canadian Apparel and Textile Industries Program (CATIP), (2) Global Opportunities for Associations (GOA), and (3) Invest Canada Community Initiatives (ICCI). Because the fashion sector tends to be considered more of a creative industry than aerospace, indirect programs such as NRC-IRAP or IRB cannot be used to help develop a fashion cluster policy.

The fashion sector also suffers from a lack of programs coming from the provincial government. There is not one provincial program that has been created to help bring about the development of a cluster policy for the apparel/fashion sector.

But if the lack of programs is a matter of concern, the interviewee views also provide us with some insights that need to be taken seriously. According to the majority of perceptions from both the aerospace and fashion interviewees, they have rarely seen any clear evidence that coordinated multi-level governance regarding their sector exists in Toronto or in the province of Ontario in general. Moreover, as far as the aerospace interviewees are concerned, “the federal government is just not there.” They are not there in terms of policy development or coordinating policy development between the three levels of government. There is also nothing in terms of industrial development policy, or programming. Instead, the federal government has taken a business climate type of approach where they bring taxes down. This strategy does very little to help the
municipality or the country. Given what has been previously stated, it is not surprising then that the fashion cluster interviewees were also equally critical of the absence of multi-level governance in the City of Toronto’s fashion cluster.

**ROLES AND INTERACTION AMONG VARIABLES**

So far much has been written about the three variables and how they have impacted the development of each cluster case study. However, no observations have been made until now about the relative roles and interactions among variables in determining and explaining the differences in the development of cluster-related innovation policy, or lack thereof, within the City of Toronto.

In the case of the aerospace cluster case study, one is dealing with a traditional manufacturing sector and industry, albeit one that has always been very highly technical, and one that also has engaged in a tremendous amount of product and process research and development. It is clear that out of the two cases the City of Toronto came closest to developing its own cluster-related innovation policy with the aerospace cluster, even though it failed to do so in the end, and certainly did not fund it properly. In the author’s view, the two most important variables that weighed heavily upon the development of this potential cluster policy were the leadership and the multi-level governance programs and activities variables.

From the outset, City Council took a special leadership interest in this sector. The Aerospace Action Partnership (AAP) was created and a specific city councillor was appointed to Chair, run, lead and control this Committee. The AAP itself was composed of all the people who were essential to bringing about a cluster-related innovation policy under the leadership of this city councillor.
And even though the aerospace cluster lacked resources, with only $15,000 allocated for cluster-related innovation policy development each year, the potential for far greater financial resources existed within the seven multi-level governance programs and activities that existed. Programs such as the NRC-IRAP, TPC and SADI all have impacted the aerospace cluster even though it is still not clear exactly how much money from these programs has flowed to the Toronto cluster given the problem of take-up which still requires further research and proper access to reliable data.

That said, the fact remains that the aerospace cluster had the potential leadership, at least within City Council, the potential programs through multi-level governance, and the financial resources that come with such programs, to forge its own cluster-related innovation policy had the AAP chosen to stay focused and work towards this goal. The problem, as has been well documented, was that the AAP became preoccupied with other matters such as obtaining its share of jobs for the production of the “C” series which was to be manufactured at de Havilland aircraft in Toronto.

Along the way as well City Council seemed to lack the resolve to drive the local leadership they had developed on council all the way up to the federal government. Even though the City’s new aerospace strategy *Flight Path* was created from funds that came from the multi-level government program known as CISP, the reality was that little input was forthcoming from the federal government when it came to developing this strategy. Had City Council been able to build a greater federal government leadership base of interest for this project, either independently or through the involvement with the AAP, the chances were good they would have been able to develop their cluster-related innovation policy and achieve their desired outcome in this area.
And even though the City was involved with the provincial government through programs such as AMIS, through its loan program to firms, once again because of the problem of take-up by these firms it is still not known just how much of an impact that any involvement by the province had on the possible creation of any cluster-related innovation policy by the City. The only thing that is known is that, in the end, it is obvious that City leadership failed to secure the obvious support of provincial government officials who sat on the AAP and impress upon them that their cluster-related innovation policy was just as important, if not more important, for the long-term viability of the Toronto aerospace industry than a few hundred new manufacturing “C” series jobs.

A final leadership problem that impacts the leadership variable existed within the Ontario Aerospace Council. The OAC is the most influential trade association representing Toronto, and all other Ontario aerospace interests, in this province. Yet, despite its well developed reputation the OAC seemed incapable of persuading the AAP, on whose board it sat, that a City-led cluster-related innovation policy was of paramount importance to the future prosperity of Toronto aerospace firms. Interviewees had high praise for its efforts in this area, but in the end it fell well short of their expectations.

A look at the Toronto Fashion cluster case study reveals a somewhat different set of problems which account for the lack of developing its own cluster-related innovation policy through City efforts.

In the case of the fashion cluster case study, one is dealing with a non-traditional manufacturing sector and industry. This industry is structured differently from that of aerospace, and it is increasingly referred to as a creative industry. It is also known as an industry that does not engage in a tremendous amount of product and process research
and development, although this may be changing now that a much greater emphasis is being placed upon the design aspect of fashion. Of the two cases being examined here, it is clear that the City of Toronto had the least chance of developing its own cluster-related innovation policy with the fashion cluster, although City fashion economic development officers have tried valiantly to do so for years, but have ultimately failed through no fault of their own. Greater forces were at work here.

The two most important variables that account for a lack of a proper cluster-related innovation policy for the fashion cluster are also the leadership and the multi-level programs and activities variables. Between these two variables, however, the weight in importance would not be placed on one variable or the other; rather in this case the weight of responsibility for a lack of a proper policy is co-shared between these two variables with perhaps a little bit more weight placed upon the leadership variable in the end.

As has been noted in the history chapter on the fashion sector, the City has been involved in helping the fashion industry since the 1980s through the use of special economic development officers who work within the Economic Development Division of the City. As part of the bureaucracy they have assumed a leadership role in this regard. And even though City Council had to give consent and approval to their actions over the years, the fact remains that City Council has never taken the leadership interest in this sector that they have displayed for the aerospace sector. For example, there was no leadership drive coming from City Council to create the equivalent of the Aerospace Action Partnership (AAP) for the fashion cluster. There has never been one specific City Councillor who let it be known they would champion the cause of the fashion sector.
What the Council did create instead was the Apparel Industry Development Council (AIDC) but no City Councillor was ever appointed to Chair, run, lead and control the AIDC in the same way that it did all of the same with the AAP. Moreover, the AIDC itself was never composed of all the people who were essential to bringing about a cluster policy under the leadership of a specific City Councillor. In the end, the AIDC was a very different organization from that of the AAP; it never had the resources or the potential mandate to be capable of ever being a catalyst for developing a cluster-related innovation policy for the fashion cluster. Lacking this potential, the AIDC could never drive its case all the way up to the federal government level to gain allies for its cause. It also never had the potential to develop a strategic vision document along the lines of Flight Path which could have established its future and aided in the establishment of its own cluster-related innovation policy.

And even though the fashion cluster had marginally more but still slim financial resources available to it than the aerospace cluster did ($30,000 versus $15,000 annually), the potential for far greater financial resources through multi-level governance programs never existed for the fashion cluster, given the paucity of programs that existed at both the federal and provincial government levels. With all of the above kept in mind the fact remains that the fashion cluster lacked the potential leadership, at least within City Council, lacked the potential programs through multi-level governance, and lacked the financial resources that come with such programs, to forge its own cluster-related innovation policy and leverage the financial assets it had at its disposal for this purpose.

Two other areas of leadership also impacted upon the ability of the fashion cluster to forge its own cluster-related innovation policy. First, as the interview evidence indicates,
there is a definite attitude on the part of the federal and provincial governments that the fashion sector and industry, at least in Ontario, is seen as a sunset industry. This is not the case in the province of Quebec where federal money flows into the coffers of the provincial government so that it can develop a cluster policy for its own Quebec fashion sector. Second, interview evidence also shows us that the main industry association, the Canadian Apparel Federation (CAF), is not providing as much of a leadership role in championing the cause of a cluster policy for the fashion cluster, given the fact that its chief responsibility is to lobby the federal government on trade policy and trade legislation matters.

A leadership void exits here, but it will not be filled any time soon as there is now a dearth of industry leadership within the fashion cluster, owing perhaps to its long-standing historically based competitiveness, secrecy and fractiousness. But it is a leadership void that does need to be filled soon since the interview evidence also indicated that, within the fashion cluster, entrepreneurial leadership is of co-equal value to that of political leadership for the successful realization of a cluster-related innovation policy for this cluster.

CONCLUSIONS

While earlier chapters have noted some comparative features between the two cluster case studies, this Chapter has provided a final systematic head-to-head comparative analysis of the two cluster case studies by looking at the three main variables in the analytical framework. Comments on the relative roles of the three variables, and interactions among the three variables, have also been offered to help understand and explain differences in cluster policy development.
A key concluding point that needs to be stressed is that apart from any other specific documents that were created as an outgrowth of individual cluster development initiatives, the *Toronto Economic Development Strategy*, which appeared in July 2000, along with the *Agenda for Prosperity*, which appeared in January 2008, were the only major economic policy documents to come out of the City of Toronto for the twelve-year period covered in this thesis. As such, these documents had an equal impact on the development of both the aerospace and fashion clusters. The leadership for the first document came from City Council, and the bureaucracy, while the leadership for the second document came from Mayor David Miller.

In addition to what the documents reveal about economic development in general and how it impacts the development of cluster-related innovation policy in the City, a quick snap-shot of the three variables shows us they can be thought of in the following ways.

Political leadership is of critical importance to any successful development of a City inspired cluster-related innovation policy. However, as the evidence also demonstrated, in the development of certain clusters political leadership, while critical, is not enough. In the end it is the blended leadership between the political and entrepreneurial forces that holds the best promise for the City to achieve its own cluster-related innovation policy.

Second, the local government finance variable as it pertains to the City’s finances alone is simply insufficient in and of itself for the City to develop its own cluster-related innovation policy. The programs and the practices that the Quebec provincial government has engaged in demonstrate this point beyond dispute, as do the failed attempts in Toronto to develop anything approaching a viable and sustained cluster-related innovation policy.
Finally, the comparative cluster case study evidence clearly shows that the multi-level governance programs and activities variable is also of critical importance to whether or not the City can develop its own cluster-related innovation policy. With these programs, the City can potentially obtain the resources it needs for such policy development. Without them, it can do little or nothing. And while leadership is of critical importance to the success of this endeavour, leadership without the appropriate multi-level governance program and activity resources can do very little.
Chapter 8

CONCLUSIONS

Purpose and Contributions

Because there was relatively little academic literature on the nature of cluster-related innovation policy and development at the local and city government level per se, the purpose of this dissertation has been to help fill that gap by undertaking an analysis of how cluster-related innovation policy development occurred in the City of Toronto. This has been done through the development and application of a local government-focused three variable analytical framework centred on leadership, local government finance and multi-level governance programs and activities. The empirical focus has been on a comparative analysis covering the past 12 years of two Toronto clusters, the aerospace cluster and the fashion cluster, but with each set in the context of the earlier longer term histories of these sectors/industries.

The analysis has focused as much as possible on cluster-related innovation policy in order to differentiate it from other broader and earlier more linear conceptions of innovation policy. The focus of the analysis has been on local government and more particularly the City of Toronto, and thus, as stressed from the outset, the analysis does not constitute a full analysis of all the potential players in cluster development. For example, it has not probed the roles and links with universities and community colleges, or with financial capital. There has been an analysis of business roles in a local government context.
This dissertation makes two contributions to the literature on cluster-related innovation policy in Canada and more generally. It offers the first focused critical empirical examination of cluster-related innovation policy development at the local city government level in Canada through two Toronto cluster case studies. Most academics and policy makers in Canada have devoted their time and attention to analyzing the problem of innovation policy from a national or broadly defined regional perspective. At the same time, cluster studies have focused on the general spatial characteristics and overall operations of innovative clusters in Canada. By undertaking a systematic study of this topic, the thesis has supplied a more focused local city government emphasis.

The second more conceptual contribution is that the framework developed and employed has drawn needed analytical attention to city government-focused cluster policy development as it pertains to the particular impacts and interwoven dynamics of the three variables selected, leadership, local government finance, and multi-level government programs and activities, as a way of understanding cluster policy development and implementation to two quite different kinds of clusters.

**Research Question and Main Arguments**

The primary research question that this dissertation sought to address and answer was: How have the concepts and practices of cluster-related innovation policy at the local level changed in the City of Toronto roughly in the last twelve years?

Three main arguments were advanced and examined. The first argument is that cluster-related innovation policy at the local government level, though it has the potential for eventual success, and though it is often touted as providing a very effective mechanism for leveraging a city’s limited amount of fiscal resources, suffers from a lack
of conceptual clarity because it is embedded in a range of other related policies described and promoted in other ways including economic development policy, prosperity policy, competitiveness, and industrial sector policies.

The second argument is that cluster-related innovation policy at the local government level is likely to have only limited efficacy and impacts unless there are explicit sources of multi-level governance financial support and strong multi-level governance coordination.

The third argument is that cluster-related innovation policy at the local level cannot be based on a one size fits all approach given that mega-cities such as Toronto face different challenges of scale and coordination, and given that clusters such as aerospace and fashion exhibit diverse innovation characteristics and coordination and cluster formation challenges.

Research Design Framework and Methodology

A research design framework was developed that consisted of three central variables: (1) Leadership, (2) Local Government Finance, and (3) Multi-Level Governance programs and activities. These variables were used to examine two quite different clusters: (1) The Toronto Aerospace Cluster, and (2) The Toronto Fashion Cluster. All of these variables emerged from a preliminary look at the three streams of the literature drawn upon in the research.

These variables were incorporated into a matrix that has been designed as a three by two research grid. These specific variables were chosen because of their relevance for obtaining an overall understanding of the research question which is city government focused.
A qualitative research methodology was employed, built around the analysis of two case studies. The analysis of these case studies was undertaken and developed by using two techniques. The first technique consisted of a systematic exploration of existing documentation from the City of Toronto on their clusters. Federal and provincial documents were also utilized in the case study analysis, as well as in some aspects of the literature review. The second complementary technique employed consisted of semi-structured confidential interviews. The interviews were used for a detailed investigation of cluster-related innovation policy development and change during the twelve-year period.

Moreover, as noted, the analysis was also placed within historical context through the development of two historical chapters. Chapters 3 and 4 showcased the development of these industries under earlier kinds of industrial, trade and social public policy prior to the case study analysis period of each cluster, thus providing a greater understanding of each industry’s characteristics, strengths and weaknesses as it entered the cluster-related innovation policy era.

**Literature Streams**

Each of the three literature streams examined in Chapter 1 was important for its own specific reasons. The first literature stream dealt broadly with the literature on innovation and innovation policy; with a focus on the problem of finance. The second literature stream was devoted to understanding multi-level governance institutions, with a focus on general characterizations and to some extent with multi-level governance programs and activities. The final literature stream looked at the structures and problems of local government, with a particular focus on the core nature of leadership. Together, the three
streams provided a reasonable and relevant underpinning that helped in the construction of the research framework and design, the two cluster case studies and the historical context in Part 1 of the thesis. In addition, the literature review drew some initial useful attention to issues related to path dependency theory (see further comments below).

Research Results, Arguments and Commentary

Our first argument is that cluster-related innovation policy at the local government level, though it has the potential for eventual success, and though it is often touted as providing a very effective mechanism for leveraging a city’s limited amount of fiscal resources, suffers from a lack of conceptual clarity because it is embedded in a range of other related policies described and promoted in other ways including economic development policy, prosperity policy, competitiveness, and industrial sector policies.

When the evidence for this first argument is examined, it seems to indicate that cluster-related innovation policy could have provided a very effective mechanism for leveraging the City’s limited amount of fiscal resources but fell well short of doing so, and thus this first argument is borne out empirically. In principle, all of the ingredients were there in the Toronto aerospace cluster: the firms, government officials, unions and associations all came together for a time under the organization of the AAP, but they failed to create viable cluster-related innovation policy because they became sidetracked on the more specific goal of obtaining the “C” series aircraft jobs for de Havilland in Toronto. Once the bid was lost for this endeavour, the potential cluster collapsed, thereby nullifying for all intents and purposes any future attempts on the part of the AAP to ever again create a cluster-related innovation policy. Thus this potential cluster never had a chance to evolve into something closer to a true cluster. And since it did not have the
opportunity to evolve into a cluster, it also lost the chance to work with a group of firms. Most of the people who were interviewed think that the aerospace sector is a supply chain and not a cluster of firms and other players within the Toronto aerospace sector.

This same situation is also found within the potential fashion cluster. A majority of the interviewees did not think that the fashion sector is a real cluster, given the fractious nature, competitiveness and secrecy that are so characteristic of this industry locally in the Toronto area. Most of the people who were interviewed thought the apparel/fashion sector was a supply chain and nothing more. Moreover, and more importantly, the fashion sector suffered from the fact that there was never an organization created for it which had the same potential scope and mandate of the Aerospace Action Partnership (AAP). The fashion sector did have recourse to the Apparel Industry Development Council (AIDC) but this was a very different organization from that of the AAP. It was created as a non-profit corporation to assist apparel industries in the province of Ontario by developing garment industry training courses. At no time in its development was there even the faintest hint that it could ever become an organization devoted to developing a cluster-related innovation policy for the apparel/fashion sector.

As far as the ability to draw in the available resources of senior levels of government is concerned, the only clear evidence that is available is the fact that the Aerospace Action Partnership (AAP) obtained money through the federal government program known as CISP to develop its Flight Path document for the future vision of the aerospace sector. Other than this program, there was never a time during any of the interviews where an interviewee indicated that any other available resources from the senior levels
of government had been directed to the City, or to firms that the City was dealing with, for cluster-related innovation policy development purposes.

The empirical analysis also shows how cluster-related innovation policy at the city level is deeply embedded in a range of other related policies described and promoted in the name of economic development policy, prosperity policy, competitiveness, and of course the legacy and current impacts of industrial sector policies. Thus, again it would appear that overall cluster-related innovation policy has had limited traction.

The second argument is that cluster-related innovation policy at the local government level is likely to have only limited efficacy and impacts unless there are explicit sources of multi-level governance financial support and strong multi-level governance coordination.

The aerospace case study evidence suggests overall that the federal government is not a focused cluster development player. Moreover, it is not engaged in terms of policy development, or coordinating policy development, among the three levels of government. Instead, the federal government tended to take a business climate approach rather than a focused cluster development approach, which does not help the city or municipality per se.

Out of the many interviews that were conducted for the fashion cluster case study, over 70 per cent stated there was little or no evidence, from their point of view, that coordinated multi-level governance existed either in Toronto or in the province of Ontario in the fashion sector.

Therefore based upon the evidence that has so far been deduced, it would appear that cluster-related innovation policy is indeed impossible to develop effectively, at least in a
city as big as Toronto, unless there are explicit sources of multi-level governance support and coordination.

The third argument is that cluster-related innovation policy at the local level cannot be based on a one size fits all approach given that mega-cities such as Toronto face different challenges of scale and coordination, and given that clusters such as aerospace and fashion exhibit diverse innovation characteristics and coordination and cluster formation challenges.

An examination of the interviewee’s views suggests that this argument is borne out broadly speaking. Several of the interviewees indicated that Toronto has to be treated differently when it comes to the development of such cluster policy. And this does not mean just the City of Toronto proper, but also the Greater Toronto Area, the GTA. This is the case because arguably it is only in the major cities such as Montreal, Toronto and Vancouver that one truly finds all of the necessary critical ingredients that can come together to produce a cluster-related innovation policy. Many of the interviewees thought that in the future economic development will have to occur at the city-region level if it is to be successful. Today, industries such as aerospace transcend the actual boundaries of the City of Toronto, so this is a real problem for cluster development per se.

However, the thoughts that these interviewees expressed were correct: today competition in this era of globalization is not just between cities as much as it is between large mega-city-regions. At the present time, none of the economic development departments in the satellite cities are working together with the City of Toronto, so the end result is utter fragmentation with nothing being cast on a regional basis.
This fragmentation could be minimized if the 16 municipalities that comprise the Greater Toronto Area (GTA) would consider coming together to develop one regional investment promotion agency at least as a key starting point for coordination. This new agency could then lead investment efforts into the aerospace and fashion sectors (and others) on behalf of the entire Toronto city-region. The provincial and federal governments will also have a role to play here as well by making sure that more resources are allocated to these city-region areas so that cluster-related innovation policies can be better developed.

The final argument is also borne out in a different way by the two case studies themselves. Cluster potential is quite different given the different structure of the two industries in the Toronto area. Their historical context and their policy auspices have also been different. Moreover, aerospace firms also engage in rather large technology product and process developments, whereas the fashion industry/cluster is seeking to emerge with a more emphatic design focus as it gets variously renamed from its textile and clothing roots.

**Related Observations and Future Research**

The research that has been conducted on the aerospace and fashion sectors and clusters clearly indicates that these industries should be thriving in the future as they have in the past. But that will only happen if the leadership, the local government finance and the multi-level governance programs and activities are present, along with of course other factors which have not been explored in this thesis such as universities and community colleges, and financial capital. Having conducted case study research for both of these clusters, it is this author’s firm contention that the evidence strongly indicates that the
City of Toronto’s cluster-related innovation policy can only succeed within an effective and coordinated multi-level governance context. Time and again, numerous measures which the City undertook to bolster its own cluster policy development failed because the City either did not possess the leadership, the financial resources, or the mandate to make these initiatives successful over the long-term.

And this is precisely why both the documents, as well as the interview data, clearly indicate that political leadership is critical to any cluster-related innovation policy development. The type of leadership needed, as we have seen, will always need to come variously but in a coordinated manner from City Council, from the city bureaucracy and from the mayor.

Another look at the weighting of the variables provides us with further insights about this matter as well. For example, when it came to the development of the aerospace cluster, the two most important variables that weighed heavily upon the development of a potential cluster-related innovation policy were the leadership and the multi-level governance programs and activities variables. Between these two variables, leadership was the more powerful variable in this case, followed closely by the multi-level governance programs and activities variable. In the case of the fashion cluster, the two most important variables that account for a lack of a proper cluster-related innovation policy are also the leadership and the multi-level governance programs and activities variables. That said, had the political leadership at the City level been able to forge deeper links with their counterparts at the federal and provincial levels, and communicate their vision for both the aerospace and fashion clusters in a more compelling manner, perhaps an effective cluster-related innovation policy would have been the outcome,
since the evidence indicates that political leadership predominated in the forging of a cluster-related innovation policy for the aerospace cluster, as well as occupying an important place in the formation of any potential cluster-related innovation policy for the fashion cluster.

However, none of the above can become a reality without the appropriate finances. The budget document evidence clearly shows that both the aerospace and fashion sectors are simply not receiving sufficient amounts of money from the City to be able to develop a proper cluster-related innovation policy. The City of Toronto’s Operating Budget increased by 68 per cent over a ten-year period, while the Economic Development Division Operating Budget increased by only 30 per cent during this same time. Moreover, the programs and the practices that the Quebec provincial government is engaged in demonstrate this point beyond dispute, as do the failed attempts to develop a cluster-related innovation policy that the City has tried. This sets the stage for the importance of the third and final variable, multi-level governance programs and activities.

The documents for the multi-level governance programs and activities variable reveal the fact that there are a number of programs for the aerospace cluster but there is a scarcity of programs for the fashion cluster. As the evidence has clearly demonstrated, the multi-level governance programs and activities variable is of critical importance to whether or not the City can develop its own cluster-related innovation policy. With these programs the City obtains the resources it needs to achieve its desired objectives. Without them, the City can do little or nothing of any great importance. While it is true that the leadership variable is critically important to any potential innovation policy success for
the City, the reality is that leadership without the appropriate multi-level governance financial and program resources can do very little.

So even though the City was unable to achieve its goal of developing a cluster-related innovation policy, and even though outcomes were the same, the evidence in this thesis indicates the outcomes were the same for different reasons. In the end, however, the fact remains that the aerospace cluster had the potential leadership, at least within City Council, the potential programs through multi-level governance, and the financial resources that come with such programs, to forge its own cluster-related innovation policy had the AAP chosen to stay focused and work towards this goal.

This was not the case with the fashion cluster. The fashion cluster lacked the potential leadership, at least within City Council, lacked the potential programs through multi-level governance, and lacked the financial resources that come with such programs, to forge its own cluster-related innovation policy and leverage the financial assets it had at its disposal for this purpose.

The emphasis that has been placed on the role of multi-level governance programs and activities throughout the thesis leads naturally to the drawing of some appropriate conclusions about multi-level governance.

The first observation is that obviously there are other issues about multi-level governance that can be thought of in a general sense. For example, a specific observation could be about how the study of multi-level governance underpins the role of the city government in the sense that it shows us the weakness of city government finances. However, since much has been written about this aspect of city government in Chapter1, the specifics of this case will not be repeated here again.
Moreover, another conclusion is that there are other issues for broader research in this field as well. One could, for example, tie together the issue of infrastructure spending to the issue of multi-level governance. After all, an important part of the city strategy in Canada is about infrastructure and about the need to get better infrastructure spending in all cities in Canada. Therefore Canada’s multi-level governance needs more specific analysis of infrastructure spending and how this would impact related industrial sectors because we need to understand how this spending weakens cities financially even though they are the centres of economic and civic life.

The analysis has also drawn contextual analytical attention to analytical issues related to path dependency theory. Features of path dependency can be linked to some of the variables that comprise the analytic framework thereby showing the complementary relevance of this concept for the thesis, in general, as well as for the two case studies in particular: the aerospace cluster and the fashion cluster.

The aerospace cluster case study, for example, showed that once the Aerospace Action Partnership (AAP) was conceived and established under the leadership of City Councillor Maria Augimeri a range of outcomes potentially existed for the work that this organization was created to do. However, both contingency as well as timing and sequence played critical roles in the final outcome of this work. Instead of concentrating on developing the best possible cluster-related innovation policy they could obtain, the AAP became fixated on obtaining their fair share of the new “C” series aircraft so that they could save the current jobs they had at de Havilland. But this relatively small event occurred at the right moment: at first it was only the unions who were pushing the leadership of the AAP to accept this position. In a short period of time, however, soon the
leadership of the AAP had adopted this option as the only feasible one, and all the long-term work of developing a cluster-related innovation policy was abandoned.

Moreover, as has been stated above, in any path dependent process, *when* an event occurs is critical. The decision to only opt to secure the “C” series jobs occurred quite early on in the life of the AAP’s existence; therefore any move on the part of some members to urge the leadership of the AAP to rethink this decision came too late in the sequence of events where timing is so critical. Had these same members tried to do this earlier, they might have met with success.

And following this train of events to its logical conclusion shows us that once these path dependent decisions were made inertia set in. In other words once this kind of process has been established, positive feedback generally leads to a single equilibrium, and once this equilibrium is established, it becomes resistant to change, which is basically what happened in the case of the aerospace cluster case study. The leadership of the AAP was resistant to any change once this decision had been taken.

In the case of the fashion cluster case study, as Chapter 7 clearly indicates, City Council never took the leadership interest in the fashion sector that they displayed for the aerospace sector. For example, there was no leadership drive coming from City Council to create the equivalent of the Aerospace Action Partnership (AAP) for the fashion cluster. And there has never been one specific City Councillor who stated that they would champion the cause of the fashion sector. What City Council did create was the Apparel Industry Development Council (AIDC), but the AIDC was a very different organization from that of the AAP because it never had the leadership, the resources or the potential mandate to be capable of developing a cluster-related innovation policy for the fashion
sector. Lacking this potential, the AIDC could never drive its case all the way up to the federal government level to gain allies for its cause.

However, if a lack of leadership created a case for path dependency so too did a lack of multi-level governance programs and activities for this second case study. The paucity of multi-level governance programs and activities that are available to the fashion cluster in the province of Ontario, as compared to the province of Quebec, is truly striking. As the interview evidence indicates, there is a definite attitude on the part of the federal and provincial governments that the fashion sector, at least in Ontario, is seen as a sunset industry. This is most definitely not the case in the province of Quebec where federal money flows into the coffers of the provincial government so that it can develop a cluster-related innovation policy for its own fashion cluster.

By way of contrast, in Ontario the provincial government has not developed any programs per se which could specifically aid the fashion sector. At the federal level, there are three federal programs that are relevant to the fashion sector on paper, but in reality two of these programs are used for export development. So the only program that was used for cluster development was CATIP. However, this program was only introduced in 2002, then the federal government cut $24 million from this program for the years 2006 to 2008, and then they terminated the program in March 2010. Currently nothing has been developed to replace it despite fierce lobbying on the part of the fashion sector to the federal government.

Here once again we see the importance of contingency and timing and sequence for the development of path dependency as it relates to the development of public policy, and in this case, for the development of cluster-related innovation policy. As the only
program provider, the decision on the part of the federal government first to cut and then to terminate CATIP has set this sector on a path to eventual and continuous crisis as it struggles with massive import penetration from LCD countries. It has also made the development of any cluster-related innovation policy on the part of the City practically impossible. Without the additional resources of multi-level governance programs and activities, the interview evidence clearly indicates that any type of cluster-related innovation policy is impossible given the lack of financial resources at the disposal of the City.

One final point needs to be made about path dependency insofar as a case can be made for path dependency when it comes to the issue of economic development and clusters and the use of language which the City uses around this issue.

There is path dependency regarding the discussion that is used for policy. Some people within the bureaucracy are talking about economic development, while other people within the City of Toronto’s Economic Development Division are talking about cluster development. So it is path dependent where some of this sectoral discourse breaks away from the world that calls this by a very different discourse.

Ultimately, this is about the use and choice of language. Clusters is terminology for a changed policy discourse. The documents reinforce this thinking to a great extent. The main City economic development documents are not about clusters per se, even though there is clearly a strong desire on the part of the City’s Economic Development Division staff to develop a definite cluster-related innovation policy, they are about how the City was thinking about overall economic development for the City of Toronto. Despite the fact that the City of Toronto had been dealing with cluster development prior to
amalgamation, cluster development in general after amalgamation took place on January 1, 1998 was an add-on to the overall economic development picture, as was the issue about money and how much money was needed for specific cluster development.

Areas For Further Research

As indicated in the structure and logic and boundaries of the study, there are clearly aspects of innovation and cluster policy research in the two case study areas, and more generally, that warrant further research than has been possible here. One cluster implementation area that requires further research concerns the issue of the precise take-up of varied multi-level governance programs by firms and industry associations in both the aerospace and fashion clusters.

If it can be proven that significant amounts of money have been given to associations for the purpose of developing cluster-related innovation policy, this may well coincide with a definition of multi-level governance, and also of clusters, which sees power and money being pushed downward to other levels of government as well as outward to third party groups so that they can shape policy. However, this information will not be easy to obtain: requests for any amount of money given to associations by either the federal or provincial government will involve a careful mix of sources and methodologies.

A similar kind of empirical digging problem centres on the issue of how much money is allocated specifically for cluster-related innovation policy development by the City of Toronto each year. The City argues they cannot disclose the exact amount of money that is allocated for such purposes because the figure for cluster development is part of an aggregate budget figure that includes salaries and wages. Since salaries and wages are a private matter, therefore it cannot disclose the amount of money that is allocated for
cluster development. This is an important figure to obtain because it will allow us to see just how much money is allocated specifically for cluster-related innovation policy matters as opposed to economic development in general.

The second issue that warrants further research concerns the problem of venture capital financing in innovation-related cluster development. A part of the larger literature on innovation policy, this issue applies more to the fashion cluster than to the aerospace cluster. Since aerospace is considered to be a more stable industry than fashion, it has access to more traditional forms of financing such as banks.

In a similar way, another obvious area of complementary and extended research is to provide an account of the role of universities and community colleges in cluster development in Toronto and elsewhere, including in particular their specific cluster links with municipal government, an area not usually mapped or analyzed.

Finally, one last issue that could be viewed as another area for further research involves the issue of whether or not industrial policy or innovation policy is the better policy for achieving desired outcomes within any given industry. This issue first came to the forefront with some of the interviewees who were interviewed for the fashion cluster. Free trade viewed as a form of industrial policy garnered both criticism and praise from these interviewees. That said, for all of its past flaws, industrial policy has worked in the past to help Canadian industry flourish. Innovation and cluster policy, on the other hand, can be viewed as a departure and transformation from an earlier focus on industrial policy. The key question to ask about this new policy is: Does innovation and cluster-related innovation policy promise more than it actually delivers and does it yield results? The case study research undertaken in this thesis would seem to suggest that innovation
and cluster-related innovation policy does indeed promise more than it actually delivers, but further empirical research is certainly needed to establish more solid evidence that this is the case.

In conclusion, whether it is this current research that is the focus of our attention, or whether it is areas of further research that spark our creative imagination, it is clear that Canada’s innovation and related cluster policy architecture is going to have to change and all three levels of government will have to do more if Canada is to live up to its innovation policy and cluster development potential in the 21st century.
APPENDIX A:

INTERVIEW GUIDE

Part A: Federal, Provincial and Municipal Governments

(IRAP, NRC, Industry Canada, HRDSC, Regional Development Agencies, Community Business Development Organizations)

1. What role, if any, do governments play in supporting economic development policy generally, and cluster policy specifically, in the City of Toronto? What is your position with regard to cluster development?

2. In your experience, how effectively, and in what ways, do the three levels of government work together in support of innovation based cluster policies in the City of Toronto?

3. What is the city’s strategy? What are their key policies?

4. Who do City officials work with in the federal and provincial government when it comes to developing a cluster policy and overall innovation strategy?

5. What are the most important federal programs that the City draws upon to implement its cluster-based innovation policy or strategy?

6. What role do provincial programs play in the City’s cluster-based innovation strategy?

7. What other agencies are involved in this process?

8. What is the primary activity that the economic development budget of the City is allocated towards?
9. Is there a special budget for cluster development activities?

10. What other sources of funds can the City tap into for cluster development? How much money is spent on this?

11. How has the City financed cluster strategies to date?

12. Who exercises the leadership roles within municipal political institutions with respect to innovation policy and the formation of a cluster strategy?

13. Does the Mayor exercise this role alone, or do individual bureaucrats have an important role to play here as well?

14. What is the role of other elected politicians, including the committee Chairs of the Economic Development Committee and the Budget Committee in the development of a cluster policy?

15. Who are the key players at the federal and provincial level that are involved in the development of a cluster policy for the City of Toronto?

16. What other actors were involved in this process?

17. What role do consultants who work on studies for the City play in the design of a cluster policy?

18. How important is leadership in all of its forms: (1) political; (2) civic; and (3) entrepreneurial for the development of cluster policy in the city-region?

19. What would be the most important change, or improvement, in intergovernmental cooperation that would contribute overall to meeting the City of Toronto’s cluster development and innovation objectives?
Part B: CIVIC ASSOCIATION LEADERS/MEMBERS

( Includes executive directors, board members, and staff support in the associations)

1. What kind of programs or services does you association deliver to its members?

2. How long has your organization or association been involved in formulating local economic development strategies?

3. Who were the individuals and/or organizations inside and outside the association who played a key role in developing these local strategies?

4. Were any of these local strategies specifically designed to foster the development of clusters?

5. What are the major barriers or challenges that local civic associations face with respect to promoting a cluster policy and innovation policy agenda in the city region?

6. How closely does your association work with the City government to develop a cluster policy?

7. What contribution has your local civic association made with respect to its goals for local economic development, including innovation? (e.g. disseminating research findings developed by research centres or institutes; brokering research partnerships between companies in the organization; organizing network events; helping companies obtain financing, stimulating the supply of highly skilled personnel to local firms, etc.

8. What role, if any, do governments play in supporting economic development policy generally, and cluster policy specifically, in the City of Toronto?

9. In your experience, how effectively, and in what ways, do the three levels of government work together in support of innovation based cluster policies in the City of Toronto?
10. Who do City officials work with in the federal and provincial government when it comes to developing a cluster policy and overall innovation strategy?

11. What would be the most important change, or improvement, in intergovernmental cooperation that would contribute overall to meeting the City of Toronto’s cluster development and innovation objectives?

12. From your perspective, who exercises the leadership roles within municipal political institutions with respect to innovation policy and the formation of a cluster strategy?

13. Does the Mayor exercise this leadership role alone, or do individual bureaucrats have an important role to play here as well?

14. How much input does your association have with either the Mayor, or civic politicians and committee chairs, when it comes to developing a cluster policy for the City?

15. How much influence do the cluster consultants have in the development of an innovation cluster policy? Did any of these consultants work directly with your association in any way?

16. Do you think that the cluster X in Toronto exhibits all of the characteristics of a cluster? If you do not, what key things are missing? (Are there buyer/supplier relations? Are firms sharing knowledge? Do firms have linkages to the universities for research purposes?)

17. Can governments create clusters, or must there be certain antecedents present, such as social capital, before cluster creation can take place?

18. What role do provincial programs play in the City’s innovation strategy?

19. What other agencies are involved in this process?
Part C: FIRMS

( Includes interviews with Senior Managers and Vice-Presidents )

1. Successful clusters, it is argued, are compared to those firms and non-market institutions that interact to accumulate and act upon knowledge. This is accomplished by building, maintaining and improving the frequency and importance of interactions among many competing lead firms, new firms suppliers, customers, and non-market institutions. Do you see a lot of evidence that all of this is happening within this specific cluster?

2. If the evidence is lacking in this regard, what needs to be done to bring this about?

3. Has the City’s cluster policy strengthened the following key linkages: (i) vertical linkages between customers and suppliers; (ii) horizontal linkages between firms and industry associations; (iii) linkages between firms and non-market institutions such as universities and research institutions?

4. Do you think that vocational training institutions are linked adequately enough to be a part of a network that helps to create a proper cluster policy?

5. In your opinion, is it possible to achieve any kind of cluster policy, or innovation policy, without employing the active use of the multi-level governance concept?

6. How well do the three levels of government work together in the City region to achieve a cluster policy or innovation policy?

7. What would be the most important change, or improvement, to intergovernmental cooperation that would contribute overall to meeting the City of Toronto’s cluster development and innovation objectives?

8. How important is leadership in all of its forms: (1) political; (2) civic; (3) entrepreneurial for the development of cluster policy in the city-region?

9. Do you think that this cluster in Toronto exhibits all of the characteristics of a cluster? If you do not, what key things are missing?
10. Can governments create clusters, or must there be certain antecedents present, such as social capital, before cluster creation can take place?

11. What role do you think provincial programs play in the City’s innovation strategy? What role do federal programs play in this strategy?

12. How important are the provincially created RINS—Regional Innovation Networks—to the development of clusters?

13. What other agencies are involved in this process?

14. From your perspective, who exercises the leadership roles within municipal political institutions with respect to innovation policy and the formation of a cluster strategy?

15. Does the Mayor exercise this leadership role alone, or do individual bureaucrats have an important role to play here as well?

16. How much input does this firm have with either the Mayor, or the bureaucrats, when it comes to developing a cluster policy for the City of Toronto?

17. Is this firm a spin-out, or a spin-off from another one in the locality?

18. Which inter-firm transactions are based upon preferential contacts with neighbours?

19. What kinds of relationships exist, if any, with local business support agencies, lawyers, bankers, venture capitalists and the like?

20. How would you describe the relationships among networks or associations and government actors at the local level?

21. Do interactions tend to be collaborative or conflictual?
APPENDIX B:

AEROSPACE CLUSTER CASE STUDY INTERVIEWS

Interview 1. Interview with a retired aerospace executive, Toronto, Ontario, September 9, 2008.


Interview 5. Interview with a Canadian Auto Workers (CAW) Union Representative, Toronto, Ontario, August 8, 2008.


Interview 13. Interview with a Toronto aerospace executive, Toronto, Ontario, October 9, 2008.

APPENDIX C:

FASHION CLUSTER CASE STUDY INTERVIEWS


Interview 2. Interview with a Government of Canada, Industry Canada (Toronto Regional Office), government official, Toronto, Ontario, October 6, 2008.


Interview 4. Interview with the Canadian Apparel Federation, Senior Management staff member, Ottawa, Ontario, November 28, 2008.

Interview 5. Interview at the Toronto Fashion Incubator with a Senior Management staff member, Toronto, Ontario, November 25, 2008.

Interview 6. Interview with the President of a major designer/manufacturer firm in Toronto, Toronto, Ontario, February 20, 2009.

Interview 7. Interview at Ryerson University with a Professor in the School of Fashion, Toronto, Ontario, February 26, 2009.


Interview 10. Interview with the creative Director of a Toronto Fashion House, Toronto, Ontario, January 27, 2009.


Interview 12. Interview with a Senior Management staff member with the Toronto Economic Development Corporation (TEDCO), Toronto, Ontario, November 5, 2008.
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